

# URBAN RIVERS - VITAL SPACES

## MANUAL FOR URBAN RIVER REVITALISATION

### IMPLEMENTATION, PARTICIPATION, BENEFITS



This project is implemented through the CENTRAL EUROPE Programme co-financed by the ERDF.

## Poland



### Central Mining Institute, Katowice (Lead Partner)

Plac Gwarków 1 • 40-719 Katowice  
Leszek Trzański • Agnieszka Gieroszka • Małgorzata Kopernik • Krzysztof Korczak  
• Paweł Łabaj • Anna Mathea • external author: Agnieszka Brożkowska



### City of Katowice (PP2)

ul. Młyńska 4 • 40-098 Katowice  
Sabina Denysenko • Krystian Gryglaszewski • Adam Lipiński



### City of Bydgoszcz, Department of Municipal Utilities and Environmental Protection (PP3)

Ul. Jezuicka 4a • 85-102 Bydgoszcz  
Bogna Rybacka • external authors: Anna Januchta-Szostak • Aleksandra Czyżewska  
• Barbara Kozłowska

## Czech Republic



### City of Brno, Department of Urban Planning and Development (PP4)

Kounicova 67 • 601 67 Brno  
Hana Bernardová • Ivan Hloušek • Ilona Hvězdová



### Urban Planning and Development Institute of the City of Pilsen (PP5)

Škroupova 5 • 305 84 Plzeň  
Eva Brejchová • Pavlína Valentová

## Germany



### City of Stuttgart, Department of City Planning and Urban Renewal (PP6)

Eberhardstr. 10 • 70173 Stuttgart  
Wolfgang Maier • Elisabeth Bender • external author: Bosch & Partner GmbH



### Aufbauwerk Region Leipzig GmbH (PP7)

Otto-Schill-Straße 1 • 04109 Leipzig  
Sandra Commichau



### University of Leipzig (PP8)

Institute for Infrastructure and  
Resources Management  
Grimmaische Str. 12 • 04109 Leipzig  
Linda Bigga • Robert Holländer

Institute of Sociology

Beethovenstr. 15 • 04107 Leipzig  
Karin Lange • Sylke Nissen

---

# EDITORIAL

## “Urban Rivers - Vital Spaces”

**REURIS** (REvitalisation of Urban RIver Spaces) is dedicated to meeting the growing demand for attractive and accessible watercourses in city areas by developing sustainable river revitalisation tools through transnational cooperation.

For decades, urban rivers in Central Europe were seen as a threat rather than a benefit. Thus, although river spaces are important reservoirs of biodiversity and open space in the city, their degradation and abandonment was common in Central European cities. Managing river areas to link their natural value with landscape and recreational values has been the aim of some projects implemented under EU programmes, but no project has tackled these issues exclusively in the region of Central Europe.

The main focus of REURIS is urban river space revitalisation in Central Europe. Due to the complex nature of the issues involved, many environmental, socio-economic and political challenges must be addressed. Regardless of the specific nature of a particular Central Europe city or river, a strategic approach to dealing with such issues will benefit from transnational cooperation. Thus, in order to resolve the problems mentioned above, a common set of methods and procedures has been developed that will facilitate coordinated work by multidisciplinary teams and ensure effective involvement of relevant social groups.

This manual is one of the major outcomes of the Interreg IV Central Europe Project REURIS which started in September 2008 and will be finalised by August 2012. It is meant to be a guide for planning and implementing urban river revitalisation projects. The manual is a synthesis of the transnational collaboration and exchange of expertise, knowledge, experience and know-how by experts from Poland, the Czech Republic and Germany who have been engaged in the REURIS project.

Many of the problems encountered by town planners, landscape architects and city managers who implement urban river revitalisation projects are common throughout the European Union. Although there is no lack of ideas and plans, implementation of such projects is often unsuccessful. Planning and implementing urban river revitalisation projects is one of the most exciting but also one of the most complex tasks a town planner or landscape architect may have to solve. Moreover, the financial as well as the economic benefits of such projects are often not taken into account. Thus, river revitalisation projects are often deemed too cost-intensive and considered to be a kind of luxury that can only be realised if surplus funds are available.

The REURIS project aims at solving concrete problems. Thus, in this manual, the main priority has been given to practical approaches, but also academic aspects of river revitalisation have been taken into account. Focusing on the most important problems to be solved within the implementation of urban river revitalisation projects, the manual is dealing with the following topics:

- planning systems and planning and implementation methods
- stakeholders' involvement including participative planning
- financing options and financial and economic benefits.

Finally, transnational guidelines for urban river revitalisation projects have been developed. They can serve as a checklist in planning and implementing urban river revitalisation projects. They can also be used by decision makers as criteria for evaluating urban river revitalisation projects, either in the planning stage or after the completion.

We hope that the manual will be a useful tool in the planning and implementation of urban river revitalisation projects.

The REURIS Project Team

# CONTENTS

<b>Introduction.....</b>	<b>8</b>
<b>1. Manual Part 1.....</b>	<b>11</b>
1.1 Planning methods.....	13
1.1.1 The planning systems.....	14
1.1.1.1 The planning system in Poland .....	14
1.1.1.2 The planning system in the Czech Republic .....	18
1.1.1.3 The planning system in Germany .....	21
1.1.1.4 Analysis of the planning systems in Poland, the Czech Republic and Germany .....	24
1.1.1.5 Review on the planning systems in Poland, the Czech Republic and Germany .....	27
1.1.2 Planning criteria and basic planning information.....	28
1.1.2.1 Superior planning criteria based on European law .....	28
1.1.2.2 Planning criteria and basic planning information in Poland .....	28
1.1.2.3 Planning criteria and basic planning information in the Czech Republic .....	34
1.1.2.4 Planning criteria and basic planning information in Germany .....	35
1.1.2.5 Analysis of legal requirements and availability of information in Poland, the Czech Republic and Germany.....	38
1.1.2.6 Review on legal requirements and availability of information in Poland, the Czech Republic and Germany.....	39
1.1.3 Planning methods.....	40
1.1.3.1 Planning methods in Poland.....	40
1.1.3.2 Planning methods in the Czech Republic.....	47
1.1.3.3 Planning methods in Germany.....	52
1.1.3.4 Planning methods – analysis and review .....	63
1.2 Best practices.....	65
1.2.1 Best practices in Poland, the Czech Republic and Germany .....	66
1.2.1.1 Best practices in Poland .....	66
1.2.1.2 Best practices in the Czech Republic .....	94
1.2.1.3 Best practices in Germany .....	127
1.2.2 Review .....	171
1.3 Guidelines for urban river revitalisation .....	178
1.4 Transnationally valid recommendations .....	181
1.4.1 Schemes of planning and implementation .....	182
1.4.2 Recommendations for planning and implementation .....	183
1.5 References and further reading .....	187
1.6 Annex .....	189



<b>2.</b>	<b>Manual Part 2 .....</b>	<b>196</b>
2.1	Introduction .....	198
2.2	Terms and levels of participation.....	199
2.2.1	Definition of terms.....	199
2.2.2	Levels of participation .....	200
2.3	Goals and advantages of public participation.....	203
2.4	State of the art: Evaluation of models of participation and cooperation.....	204
2.4.1	Methods of public participation.....	205
2.4.2	Models of public participation used in Poland, the Czech Republic and Germany ...	208
2.4.2.1	Models of public participation in Poland .....	208
2.4.2.2	Models of public participation in the Czech Republic .....	214
2.4.2.3	Models of public participation in Germany .....	222
2.4.2.4	Review on the models of public participation on Poland, the Czech Republic and Germany.....	230
2.5	Experiences in the context of REURIS.....	231
2.5.1	Experiences in Katowice.....	234
2.5.1.1	Planning for detailed river valley management using the example of the Ślepiotka valley.....	234
2.5.1.2	Providing information and promoting public participation in the context of the pilot action and future visions of the river corridor, as well as future scenarios .....	235
2.5.1.3	General improvement between the parties involved in urban river revitalisation in Katowice using the example “Partnership for Ślepiotka” .....	239
2.5.1.4	Conclusions and recommendations .....	242
2.5.2	Experiences in Bydgoszcz.....	243
2.5.2.1	Public participation and communication activities .....	243
2.5.2.2	Conclusions and recommendations .....	245
2.5.3	Experiences in Brno.....	247
2.5.3.1	Providing information and promoting public participation in the context of the pilot action.....	247
2.5.3.2	Promoting intensive communication between the implementation team and property owners in the project area.....	253
2.5.3.3	Conclusions and recommendations .....	254
2.5.4	Experiences in Pilsen .....	256
2.5.4.1	Involvement of stakeholders in the context of the development of all of Pilsen’s rivers and the concrete project on Božkov Island.....	256
2.5.4.2	Improvement of planning and implementation methods.....	259
2.5.4.3	Conclusions and recommendations .....	260

---

2.5.5	Experiences in Stuttgart .....	261
2.5.5.1	Providing information and promoting public participation in the context of the pilot action and future scenarios .....	261
2.5.5.2	General improvement in planning and implementation and in cooperation among parties involved in urban river revitalisation and fostering urban river revitalisation .....	264
2.5.5.3	Conclusions and recommendations .....	267
2.5.6	Experiences in Leipzig.....	269
2.5.6.1	Information about and public participation in the pilot action and future scenarios.....	269
2.5.6.2	Involvement of local stakeholders in order to raise public awareness of the importance of revitalised urban rivers.....	271
2.5.6.3	Raising awareness of the economic aspects of urban river revitalisation.....	273
2.5.6.4	Conclusions and recommendations .....	274
2.5.7	Review on the experiences in the context of REURIS .....	276
2.6	Transnationally valid recommendations .....	278
2.6.1	Scheme of cooperation and participation.....	278
2.6.2	Recommendations.....	279
2.7	References and further reading .....	282

---

<b>3.</b>	<b>Manual Part 3 .....</b>	<b>284</b>
3.1	Introduction .....	286
3.2	Financing options .....	287
3.2.1	Financing options in Poland .....	287
3.2.2	Financing options in the Czech Republic .....	293
3.2.3	Financing options in Germany .....	297
3.2.4	Review on the financing options in Poland, the Czech Republic and Germany .....	302
3.3	Costs and benefits of urban river revitalisation .....	306
3.3.1	Costs of river revitalisation projects .....	306
3.3.2	Benefits of urban river revitalisation .....	307
3.3.2.1	Approach .....	307
3.3.2.2	Definition of terms .....	308
3.3.2.3	Opportunities for and limitations of economic valuation .....	309
3.3.2.4	Categories of benefits from urban river revitalisation .....	310
3.3.2.5	Quantification of benefits .....	311
3.3.2.6	Monetisation of benefits .....	312
3.3.2.7	Literature review of European case studies .....	315
3.3.3	Experiences in the context of REURIS .....	317
3.3.4	Cost-benefit analysis .....	321
3.4	Transnationally valid recommendations .....	322
3.4.1	Scheme of financial and economic analysis .....	322
3.4.2	Recommendations .....	323
3.5	References .....	325

---

# INTRODUCTION

REURIS is a project in the Interreg IV Central Europe Programme,  
Priority 3: Using our Environment Responsibly,  
Area of intervention P3.1: Developing a High Quality Environment by Managing  
and Protecting Natural Resources and Heritage, co-financed by the ERDF.  
REURIS started in September 2008 and will be finalised by August 2012.

## About REURIS

### Background

The situation of urban river spaces in Poland, Czech Republic and Germany is in one sense very similar. In the context of industrialisation processes that occurred from the end of the 19<sup>th</sup> century through the first half of the 20<sup>th</sup> century, rivers and streams were used for sewage discharge, regulated and straightened for land reclamation and agricultural use, paved, channelled for flood protection (technical solutions) or even culverted. Areas by the riverside were often used commercially. Industrial zones and technical infrastructure such as roads or railway tracks were built in the floodplains. Large rivers were extended and used as waterways.

During the second half of the 20<sup>th</sup> century riverside areas were subject to structural changes – industrial zones were abandoned, resulting in brownfields and deteriorated open spaces. Thus, up to the present day, urban river spaces suffer from

lack of ecological functions (lack of habitat and biotope network function, lack of permeability/passability, pollution and contamination),

lack of social functions (lack of accessibility of watercourses, lack of attractive open spaces next to water, inadequate perception of rivers by the public) and

lack of spatial functions (separation of urban spaces and rivers due to technical infrastructure, neglected areas along rivers).

Since the 1980s, awareness about ecological issues has risen in both West and East Germany. In West Germany, an increasing number of river management projects have been developed and realised based on the insight that attention to ecological aspects of river maintenance does not hinder but can indeed play a role in improving flood protection.

In the Eastern European countries Poland and Czech Republic, these processes did not begin until after the fall of the Iron Curtain. Therefore, there is a longer history of experience with ecological river revitalisation in West Germany. Nevertheless, there is still a lack of awareness, appreciation and knowledge in all three countries about the manifold benefits, including social and economic aspects, of river revitalisation.

Especially in densely populated and industrialised areas, revitalisation of urban river areas contributes to a high quality of the environment as well as to a high quality of life. Urban river spaces are often the only functioning or potential reservoirs of biodiversity and open spaces in cities. Thus, the active protection and restoration of such areas is part of the repertoire of fundamental practices for shaping cities' spatial order and sustainable development.

The issue of urban river space revitalisation is complex. Revitalisation entails finding solutions for challenging environmental and socio-economic problems to meet the demands of industry, housing and mobility on the one hand and the requirements of flood protection, recreation and ecological revitalisation on the other hand.



## Objective and approach

REURIS was aimed at developing a holistic strategic approach that addressed ecological, economic, spatial and social issues and compiled a common set of methods, tools and procedures to deal with the challenges of urban river revitalisation.

As “revitalisation” has different meanings in each of the project partners’ countries and also can have various applications in a single country, the partners agreed on a common definition of “revitalisation” to use in the context of the REURIS project:

*Integrated revitalisation in urban areas is the partial reconstruction of natural and cultural landscape resources oriented both*

- *towards the improvement of natural habitats in rivers themselves or in river valleys and*
- *towards improvement in all kinds of public access and use in urban areas and their surroundings*

*by giving the rivers or river valleys new functional and spatial quality and by creating conditions for sustainable development while considering ecological, spatial, technical, social and economic aspects.*

In detail, REURIS has been dealing with the following questions:

### **Planning and implementation methods**

How can planning and implementation methods be improved?

What are the main difficulties in river revitalisation, and how can they be overcome?

What are the key factors for success in such projects?

### **Stakeholders’ involvement, including participative planning**

Which models of cooperation have met with a high degree of public consent? How can the involvement of stakeholders and the public be improved?

How can solutions be found and decisions be taken by consensus?

### **Financial and economic issues**

How can river revitalisation projects be funded with regard to current budgetary constraints?

How can the economic benefits of revitalisation be evaluated?

## Results

The project consisted, on the one hand, of a theoretical part and, on the other hand, of pilot actions, four of which implied pilot investments. Thus, there was a link between research and practice. Planning methods were not only developed, but also applied and tested.

The theoretical aspects focused on planning and implementation methods, on mechanisms and procedures for increasing public awareness and stakeholders’ involvement and on the financial and economic benefits of revitalised urban river spaces. The pilot actions, which were conducted by each partner, comprised either the implementation of a revitalisation project, the development of a concept for future revitalisation projects or the application of methods of public involvement in sustainable river space management. Workshops were held to develop these methods.

### ***Pilot actions***

The pilot actions implemented in the framework of the REURIS project focus on the following river spaces:

- Ślepiotka in Katowice,
- Old Canal in Bydgoszcz,
- Old Ponávka in Brno,
- Božkov Island in Pilsen,

- Feuerbach in Stuttgart and
- Thostgrundbach in Grimma.

Further information about these pilot actions is provided in the handbook and also the manual will refer to them at different points.

### ***Manual***

This manual is one of the major project outcomes. It presents the project results and experiences which have resulted in the formulation of transnationally valid recommendations and a compilation of practical guidelines for planning and implementing urban river revitalisation projects. Thus, the manual is addressed to people involved in river revitalisation, such as local and regional politicians, landscape planners and landscape architects, spatial and town planners, stakeholders and local and regional decision-makers.

The manual addresses the following topics, which are dealt with in three parts:

#### **Part 1: Planning and implementation methods**

The partners analysed and evaluated the planning system as well as the planning and implementation methods applied in their country. Best practice examples were analysed.

→ Results: Recommendations for better planning and implementation

#### **Part 2: Stakeholders' involvement, including participative planning**

The partners analysed and evaluated models of cooperation applied in the context of revitalisation projects and held workshops and meetings with experts and stakeholders as well as public events in order to exchange knowledge and experience, to raise awareness and to develop innovative forms of cooperation and participation.

→ Results: Recommendations for better involvement of stakeholders and better participative planning

#### **Part 3: Financial and economic issues**

REURIS has been dealing with economic issues with regard to financing options for river revitalisation projects. Furthermore, as a base for an improved awareness and appreciation of river revitalisation projects, the wide range of benefits was analysed.

→ Results: Recommendations for better budgeting and fundraising as well as for measuring the benefits

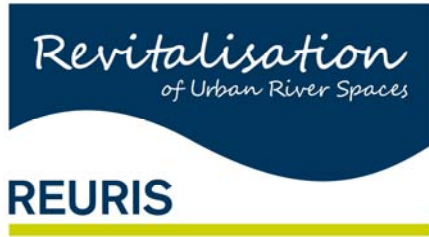
### ***Handbook***

While the manual provides a detailed insight into the project results, the handbook "Urban Rivers - Vital Spaces. Guide for Urban River Revitalisation" gives an illustrative overview of the project results.

### ***Guidelines***

Additionally, detailed guidelines were developed which refer to 4 main principles with regard to river revitalisation..

Both the manual,, the handbook and the guidelines can be downloaded from the project website: [www.reuris.gig.eu](http://www.reuris.gig.eu).



## MANUAL PART 1

# PLANNING AND IMPLEMENTATION METHODS



# 1. MANUAL PART 1

Part 1 of the REURIS manual focuses on methods for planning and implementing urban river revitalisation projects.

## Structure of the REURIS Manual Part 1

### *1.1 Planning methods*

This chapter describes and evaluates the planning systems and planning methods in Poland, the Czech Republic and Germany.

### *1.2 Best practices*

The chapter describes best practice examples of urban river revitalisation in Poland, the Czech Republic and Germany as analysed and evaluated by the project partners.

### *1.3 Guidelines for urban river revitalisation*

A wide range of aspects that are relevant to the specific requirements of river revitalisation in an urban environment are outlined in this chapter.

### *1.4 Transnationally valid recommendations*

This chapter provides a scheme for planning and implementing urban river revitalisation projects and summarises the findings of research in the REURIS project by formulating transnationally valid recommendations for planning and implementation.

### *1.5 References and further reading*

### *1.6 Annex*



## 1.1 Planning methods

Current planning methods in Poland, the Czech Republic, and Germany have an impact on the implementation, realisation and acceptance of urban river revitalisation projects. Legal and technical regulations, generally available information and information provided by local, regional and state authorities as well as the development of planning criteria, the “planning philosophy” and the self-understanding of landscape architects and town planners all affect the outcomes of urban river revitalisation projects.

Thus the first part of the REURIS manual for implementation methods is dedicated to the assessment of current planning methods. First, planning methods in Poland, the Czech Republic and Germany are described with respect to the planning system, available basic planning information, current planning methods, and detailed planning. An attempt has been undertaken to discern similarities and differences in the current status of planning urban river revitalisation projects in the countries and regions involved in the REURIS project. Based on this analysis of the strengths and weaknesses, advantages and disadvantages of the various planning methods currently employed in the three partner countries, conclusions, recommendations and a common approach to planning methods for urban river revitalisation projects will then be outlined.

## 1.1.1 The planning systems

### 1.1.1.1 The planning system in Poland

#### Structure of the public administration

Poland is a parliamentary republic governed as a unitary (that is, non-federal) state in which elements of self-government play an increasingly important role. Poland's public administration is subdivided into four levels (cf. Figure 1.1-1):

- the national government,
- the regional level, with 16 *voivodships* (provinces),
- the *powiats* (counties), of which there are currently 373, including 68 cities with the status of independent municipal counties, and
- the local level of the basic, traditional, self-governmental entities, called *gmina* (communes or municipalities), which include urban communes (towns, cities), urban-rural communes and rural communes.

The state government operates on national and regional levels. Besides the government administration (voivodship offices), there is also a self-governing voivodship (marshal offices) on the regional level. Self-governmental units are authorised to make decisions in the field of spatial planning on the levels of the region and the county and on the local level.

In the early 1990s, after about fifty years of centralised planning, Poland abolished the ideological paradigm of top-down control and introduced a bottom-up approach (cf. Mliczyńska-Hajda, 2007), which gives local autonomous governments the right to reach spatial planning decisions on the level of the commune.

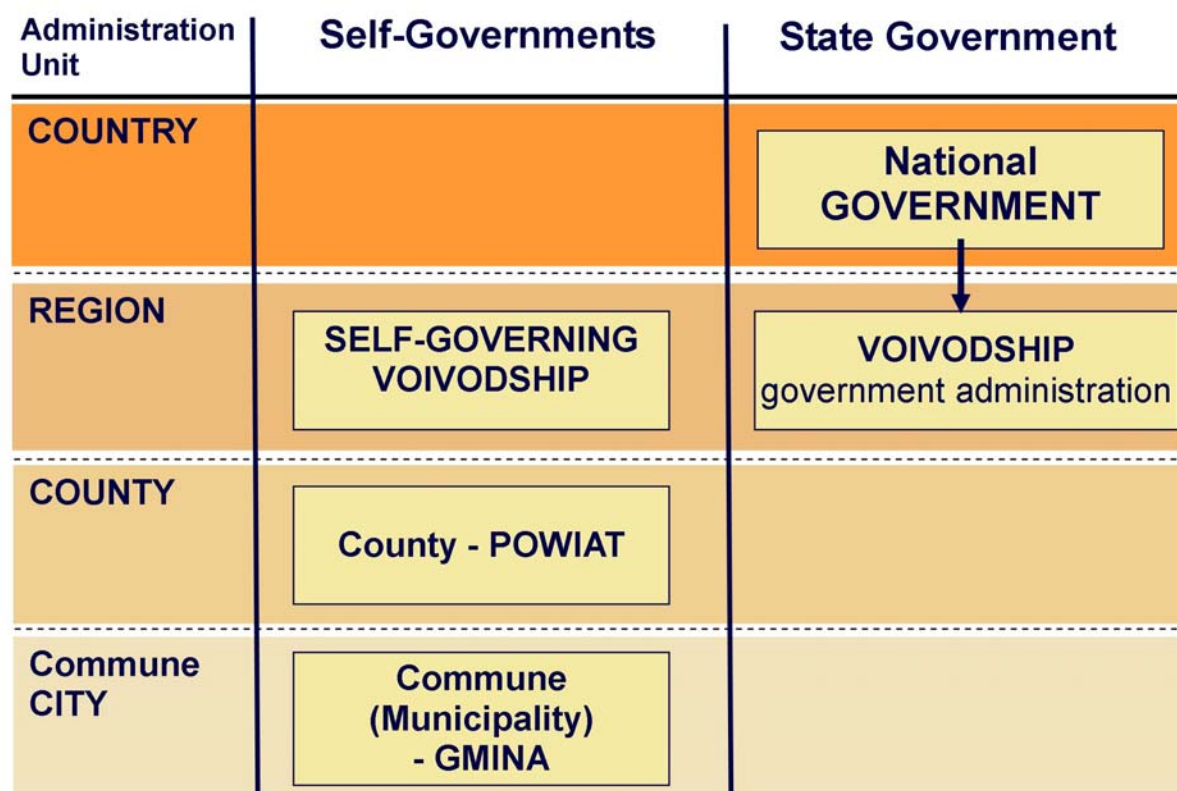


Figure 1.1-1: Structure of the public administration in Poland (© A. Januchta-Szostak).

## Description of the planning system

The Act on Spatial Planning and Development dated 27 March 2003 (Journal of Laws, 2003, No. 80, pos. 717 with subsequent changes) went into effect in 2004. Together with the Construction Law, this act establishes the legal foundations for the investment process in Poland. It is the second most important act, after the act dated 7 July 1994 on spatial development (Journal of Laws, 1999, No. 15, pos. 139 with subsequent changes) on regulating the management of space to reflect the constitutional changes made in Europe. Furthermore, it is also important because it creates opportunities for investing in a member country of the European Union (EU).

Concrete spatial planning activities are formulated on three levels of state administration (cf. Figure 1.1-2 and Figure 1.1-3):

- on the national level through the National Spatial Management Concept,
- on the regional level through the Voivodship Spatial Management Plans, and
- on the local level through the Study of the Conditions and Directions of the Spatial Management of a Commune (“Study”) and Local Spatial Management Plans, which are the only ones that are legislated by local law.

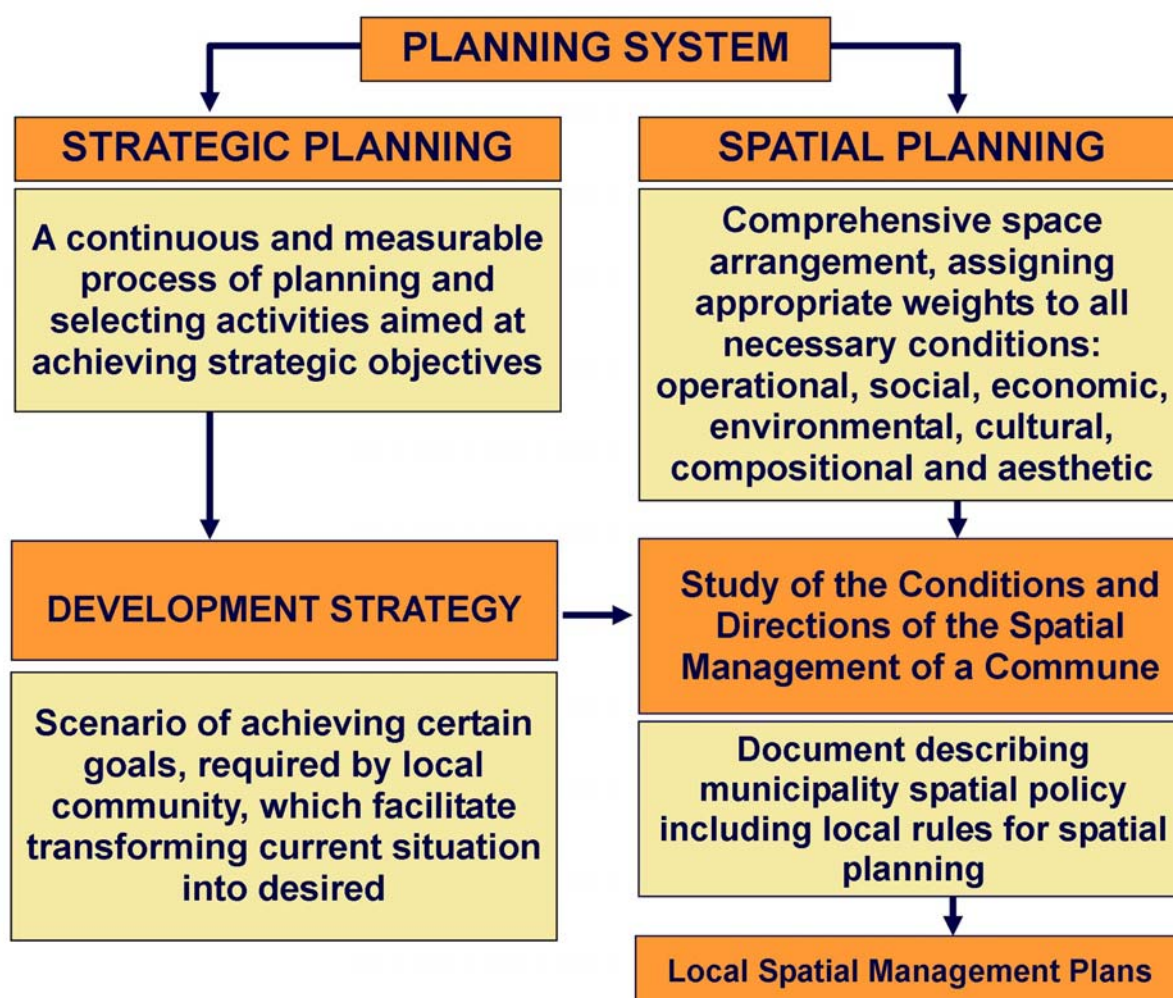


Figure 1.1-2: Spatial and strategic planning in Poland (© A. Januchta-Szostak, based on Czyżewska, 2009).

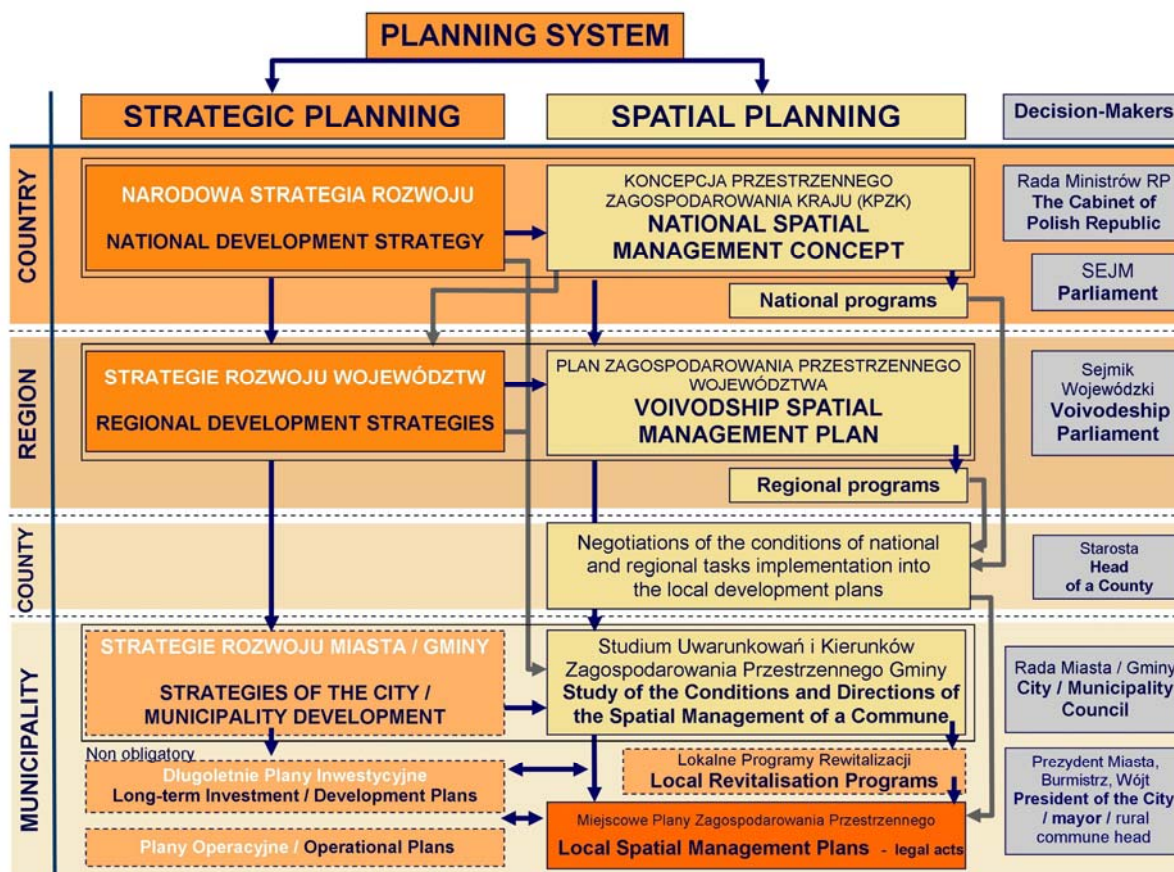


Figure 1.1-3: Spatial planning system in Poland (© A. Januchta-Szostak).

The elements of spatial management that are relevant to the cohesion of Poland as a unitary state and to international cooperation are dealt with on the national level. Spatial management on the regional level draws out the special features of particular areas of the country, pointing out spatially differentiated limitations and predispositions for development. On the local level the substantive and formal-legal foundations are created for realising undertakings foreseen on all levels of spatial planning. These three levels of spatial planning are complementary one another, and together create a hierarchical scheme without mutual or arbitrary subordination. The fundamental assumption on which the spatial planning system is based is the coherence of plans with development strategies, which are treated as social and economic assumptions, and the obligation of spatial planning to take effect on every level of territorial self-government and within the governmental administration on the national level (cf. Hajduk, 2004).

## Types of formal plans relevant for revitalisation projects

There are two kinds of formal plans which are of crucial significance for revitalisation projects in cities: Study of the Conditions and Directions of the Spatial Management of a Commune (referred to in the following as “Study”) and Local Spatial Management Plans. The provisions of these plans must conform with the city development strategy and requirements that result from higher level plans.

According to the Spatial Development Planning Act dated 27 March 2003 (Journal of Laws, 2003, No. 80, pos. 717 with subsequent changes), the Study includes both an evaluation of a municipality’s spatial development to date and a blueprint of the direction of its future development in the area of spatial management. The conditions that determine this evaluation and plans for future development reflect in particular:

- original land use,
- existing infrastructure,



- protected objects and places,
- the condition of the natural and cultural environment,
- real estate property rights,
- the quality of life of the inhabitants, and
- tasks serving the execution of supra-local public purposes.

The Study defines especially:

- environmental assets and threats to the environment,
- forms of environmental protection,
- built-up areas,
- areas excluded from building development and those in which development is permitted, together with a differentiated description of their functional features and proposed transformational activities,
- the conditions for and direction of the development of service and technical infrastructure,
- areas for which local spatial management plans can be developed, and
- areas selected for implementation of supra-local functions and programmes.

“The study is prepared for the entire territory of a municipality and the municipal council has to vote on its enactment. The study is an internally binding administrative act, although it is not an act of local law, i.e. it has no universally binding force. This means that it cannot constitute a basis for administrative decision-making (e.g. decisions on land development and management conditions). The study contains both text and graphics, takes into account the principles set down in the country’s spatial management concept, the components of the voivodship development strategy and spatial management plan as well as those of the development strategy of the municipality (only if this document is available)” (Atanasow, 2005). What is problematic about these municipal Studies in the context of river revitalisation is the fact that they do not have a standardised form and there is no definition of and or detailed cartographic record of areas (referred to in the Studies as “support areas”) where revitalisation activities are urgently needed.

The Local Spatial Management Plan is a legally binding planning document adopted by the local authorities. It establishes, for the area covered, the use of land separated by boundaries, defining its functions, methods of management, modes of infrastructure use, and also, if needed, local requirements, rules and standards of building development and other specific aspects relevant to spatial planning regulations.

Preparation of a Local Spatial Management Plan is not obligatory for the entire area of a city or commune. If such a plan is lacking for a specific area, the conditions for development and spatial management must be formulated in the course of an administrative hearing. The fragmentation of local plans increases spatial chaos in cities and causes a number of problems that obstruct revitalisation and investment processes. Other factors that impede development are the complicated procedures for preparing and enacting local plans.

Unlike the German planning system, where Landscape Plans are clearly incorporated into the spatial planning system, in Poland the general provisions that are relevant to the landscape and the natural environment are part of a Study. Article 18 of the national Environmental Protection Law dated 16 April 2004 (Journal of Laws, 2004, No. 92, pos. 880) requires that protection plans be drawn up and implemented for national parks, nature reserves and landscape parks. But most river valleys are ecological corridors that do not fall under the provisions of any of the above-mentioned legal forms of nature protection. Moreover, protection plans do not typically include urban areas.

Also important for the revitalisation of riverside areas are activities within the context of the Water Resource Programme and River Basin Water Management Plans which are the fundamental planning documents related to water management, according to the Water Framework Directive and Water Law. These programmes and plans are prepared by the regional water management boards.

### 1.1.1.2 The planning system in the Czech Republic

The land use planning system in the Czech Republic is based on the new Act 183/2006 Coll. on land use planning and building regulations (Building Act). As set forth by this law, there are “land use planning instruments”, which are categorised into

- the national Spatial Development Policy,
- land use development materials, and
- land use planning documentations.

## Types of formal plans relevant for revitalisation projects

### Spatial Development Policy

The top level for spatial planning in the Czech Republic is the national Spatial Development Policy. Its content and function can be characterised as follows:

- The Spatial Development Policy specifies land use planning tasks for the entire the Czech Republic in greater detail than the Building Act.
- It must take into account sustainable development for the area in question: a balance between conditions for favourable environmental conditions, economic development and social cohesion of the area’s inhabitants.
- It delineates sites and corridors for transportation and technical infrastructure of international and national significance.
- It sets national land use planning priorities with regard to sustainable development.
- It sets conditions for decision-making about alternatives to proposed changes in areas in specified parts of the country.
- It defines regions of specific value or with problems of international and national significance.
- It serves as baseline material for ministries and authorities in developing nationwide plans.
- It is updated once every four years.
- The commissioning party is the Ministry for Regional Development.

### Land use planning materials

Land use planning materials are comprised primarily of the following:

- analytical land use materials, which identify and assess the condition and development of an area and constraints to changes in the area in order to protect public interests (limits on land use), and
- land use studies, which verify possibilities and conditions for changes in the area, primarily the possibility of solving problems relating to a specific system in the area.

Analytical land use materials serve above all as background material for commissioning land use development policy, for land use planning documentation, and revisions to documentation, and for decision-making in the area. They also serve as material for assessing the impact of land use planning documentation on sustainable development and the environmental impact of plans (analysis of sustainable development of an area).

### Land use planning documentations

Land use planning documentation includes the Land Use Development Principles (regional development plans), the Land Use Plan and the Regulatory Plan. They are elaborated by regional authorities (counties, administrative districts) as well as by the local authorities (communes, municipalities).

Regional development plans, or Land Use Development Principles, are tied to the Land Use Development Policy. Development principles are applicable to the land area encompassed in a given region and are commissioned by the regional authority. The primary purpose of the development principles is to define conditions for economical use of the area encompassed by the region, determine corridors for large transportation construction works (highways, high speed roads and airports) and set criteria for decision-making about potential variations or alternatives. At the same time, all municipalities in the region must adhere to them in their land use planning activities. The level of detail of development principles extends to public facilities, i.e. Land Use Development Principles may be used as material to justify dispossession.

Municipal Land Use Plans, which are commissioned by municipalities and which are applicable to their entire land registry area, are based on Land Use Development Principles. A land use plan aims to rationally set forth the spatial and functional layout of the municipal land registry area and its use. In its land use plan, a municipality defines a site for which a regulatory plan will be developed.

Areas within a municipality (particularly in cities) may be further elaborated in Regulatory Plans. These plans set forth detailed conditions for the use of properties, the location and spatial layout of construction works, and preservation of values and character of the given area and the environment. A Regulatory Plan must comply with the applicable land use plan.

*Table 1.1-1: Structure of administration and urban / land use planning in the Czech Republic (© City of Brno).*

Level of administration	Document	Responsible administrative body		Content
		Processor	Approver	
Country	Land Use Development Policy	Ministry for Regional Development	National government	On a country level it identifies tasks for urban / land use planning on international and national levels. It coordinates developing of national strategies and conceptions and developing of Land Use Development Principles.
Region	Land Use Development Principles	Regional administration	Regional government	They set basic requirements for sustainable development of the region, determine areas and corridors for development of regional importance and set criteria for decision-making in between options. They respect the Land Use Development Policy.
Municipality	Municipal Land Use Plan	Local administration	Local government	It sets a basic strategy for development of the municipality, protection of its values and landscape organisation and determines areas for certain purposes. It respects the Land Use Development Principles.
	Regulatory Plan	Local administration, Regional administration in areas which are set up in Land Use Development Principles	Local government, Regional government	It sets detailed limits and requirements for land use, placing and organisation of buildings, for protection of characteristic and valuable area features.

Another aspect of land use planning in relation to revitalisation of water courses is water management planning and nature and landscape protection.

---

## Water management planning

As given by Act No. 254/2001 Coll. on water, there is a system of International River Basin Plans and a Plan for Main River Basins along with River Basin District Plans as the lowest-tier area document. The Ministry of the Environment and Ministry of Agriculture work together in international commissions to develop International River Basin Plans and international plans for flood prevention, or to develop a set of flood prevention plans coordinated on the level of international river basin areas.

The Plan for Main River Basins of the Czech Republic is a strategic water management planning document, which sets framework goals for managing surface and groundwater as well as protection and improvement of the state of surface and groundwater and water ecosystems.

River Basin District Plans (now called National River Basin Plans) are created for five-year periods for each of the country's eight river basins (Horní Vltava - Upper Vltava - , Berounka, Dolní Vltava - Lower Vltava -, Dolní Labe - Lower Elbe - and Ohře, Střední and Horní Labe - Middle and Upper Elbe - , Odra, Morava and Dyje). Smaller areas, reservoirs, are summarised and addressed in a document entitled Localities for Accumulation of Surface Water.

Decree No. 500/2006 Coll. on analytical land use planning materials, land use planning documentation and the manner of recording land use planning activities addresses the connection between the development of land use planning documentation and the water act (delineation of flood areas) and is intended to guarantee the correlation between River Basin District Plans and Land Use Development Principles.

## Territorial Systems of Ecological Stability

To support biodiversity national, regional and local territorial systems of ecological stability (TSES) have been created. The main purpose of TSES is to strengthen the landscape's ecological stability through the preservation or renewal of stable ecosystems and linkages between them. The main goals of the TSES are:

- to create a network of relatively ecologically-stable areas that favourably influence the surrounding, less ecologically-stable landscape,
- to preserve or renew the natural gene pool of the landscape, and
- to preserve or support the diversity of native species and their communities (biodiversity).

Pursuant to S. 4, Article (1) of Act No. 114/1992 Coll. on nature and landscape protection, creation of a territorial system of ecological stability occurs in the public interest, and property owners, municipalities and the national government should take part. The plans form a set of biocentres, biocorridors and linked landscape segments. TSES documents serve as material for the development of municipal Land Use Plans, regional Land Use Development Principles and the national Spatial Development Policy, in which they are delineated in a binding manner.

### 1.1.1.3 The planning system in Germany

The German planning system is divided into cross-sectional, comprehensive planning (spatial planning, landscape planning) and sectoral planning for specific individual sectors of public policy. The following chapters offer a short review of these two parts. As far as the implementation of revitalisation projects is concerned, the focus is on the system of spatial planning.

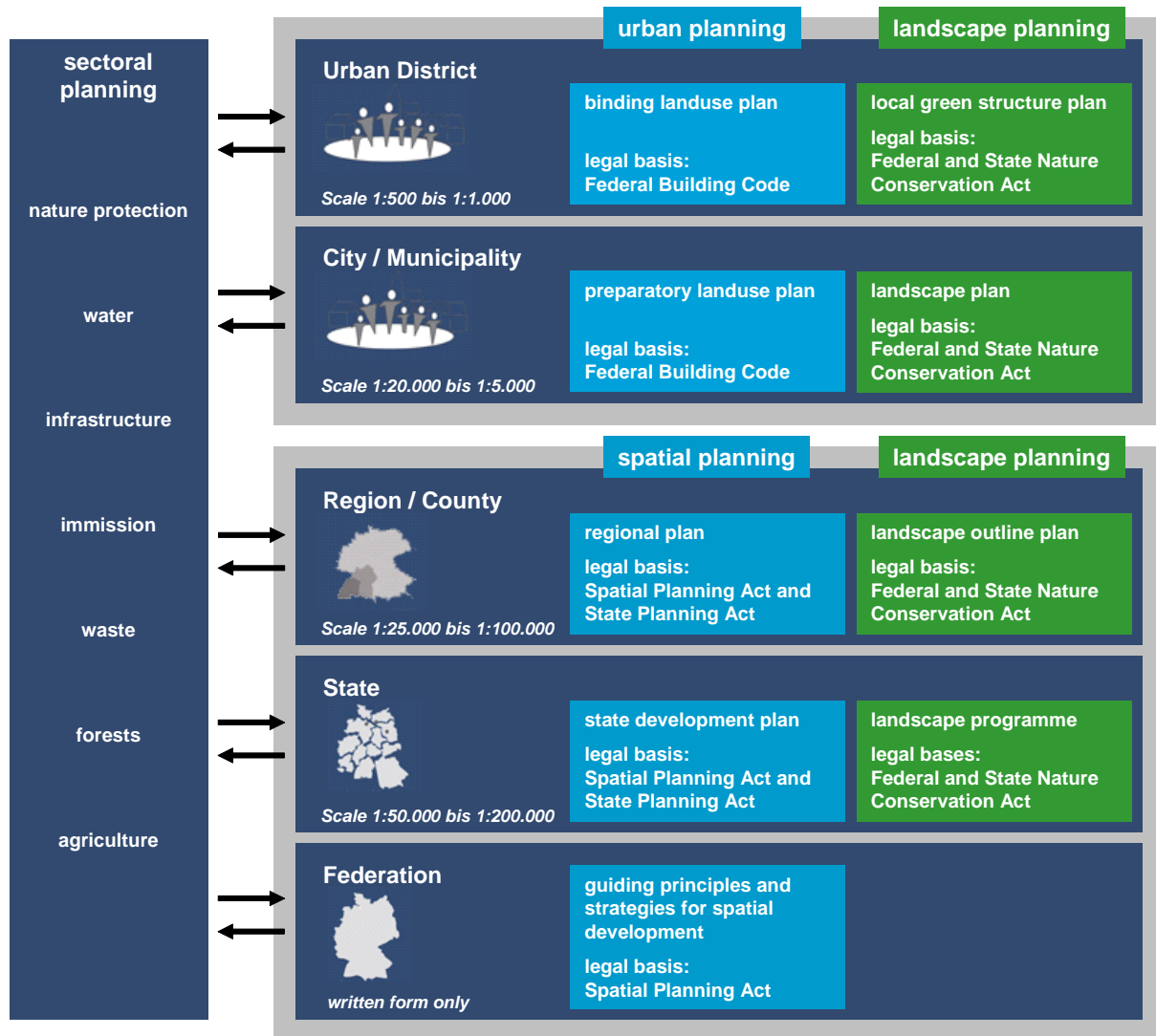


Figure 1.1-4: Levels of the planning system in Germany (based on Pahl-Weber, Henckel, 2008: 71).

## Spatial planning

Spatial planning is characterised by a hierarchical system with different levels that reflect Germany's federal structure, which is divided into federal, state, regional and local administrations. The different levels are defined legally, organisationally and physically and are clearly differentiated and interlinked by requirements with respect to notification, participation, coordination and compliance (cf. Pahl-Weber, Henckel, 2008: 38). The relation between the system's discrete levels is represented by the "mutual feedback principle" (system of combined top-down/bottom-up planning). This is a principle of spatial planning under which local, regional and supra-regional planning each influence and are in turn influenced by the other levels of planning. The purpose of this interaction is to ensure that actions taken to develop, structure and protect sub-areas of the territory are consistent with the conditions and requirements relevant to the whole. Likewise, actions to develop, structure and protect the overall territory should also

---

take into account the conditions and requirements relevant to sub-areas. The mutual feedback principle is regulated under the Federal Spatial Planning Act (cf. Pahl-Weber, Henckel, 2008: 215).

## **Federal spatial planning**

The main requirement in the field of spatial planning at the federal level is the Federal Spatial Planning Act. This act regulates assignments, guidelines and principles as well as requirements for spatial planning at other levels.

Furthermore the Federal Ministry of Spatial Planning has, in collaboration with the ministers of the individual states, laid down guiding principles and strategies for spatial development in Germany. The guiding principles and strategies refer to issues like “growth and innovation”, “securing the provision of essential public services” and “conserving resources, developing cultural landscapes”. The principles are not binding for spatial planning and related measures on subordinate levels.

## **State spatial planning**

The Federal Spatial Planning Act and the state planning acts require the preparation of state development plans, which incorporate overriding binding goals and principles of spatial planning for an entire state. The plans are prepared on the basis of all spatially significant sectoral plans pertaining to industry and commerce, transport, utilities, housing, labour and recreation, as well as nature conservation and environmental protection. Each state development plan outlines the spatial structure in textual and graphic form. Important requirements are, for example, core sites and their neighbouring areas, superordinate development corridors as well as the borders in between open spaces and densely populated areas. Goals and principles of spatial planning are to be observed as specified and taken into consideration by subordinate tiers of planning and in sectoral planning.

## **Regional planning**

The plans for regions within a state have to be specified in the state development plan. They coordinate the territorial issues of a region and deal with infrastructure, settlements and the structure of open-spaces. As such, they constitute a link between the state’s goals and principles for spatial development and the specific local aims and decisions in the context of urban land use planning. The state development plan outlines the regional structure of land uses in a textual and graphic form. The main aim of the plan is to govern the spatial order, to coordinate the development of settlements and recreational use with transportation and infrastructure networks and public facilities. Consequently, the plans also extend to different planning principles such as the concept of development corridors and core sites. The designation of green belts and green breaks/divides ensures that space is reserved for environmental concerns. This designation is therefore also relevant with regard to rivers. In addition rivers have to be identified and depicted in the plans.

The planning regions differ from state to state and are defined by state law. Similar to the State Development Plans, the aims and principles of regional plans are binding on public authorities and have to be taken into account in subordinate planning.

## **Urban planning**

The most important level for the implementation of spatial planning requirements is urban planning, which is divided into two planning levels: the preparatory land use plan and the binding land use plan. Both plans are regulated by the Federal Building Code. They consist of a map, a written section and an explanatory report.



The preparatory land use plan must be aligned with the aims of state spatial planning and the aims and principles of the relevant regional plan. This plan defines and specifies types of land use for the entire municipal territory such as residential, commercial and transportation use, agricultural and forestry land, which is regulated by the Federal Building Code. With respect to revitalisation projects, the plans can establish green spaces or outline measures relevant to bodies of water or soil development as well as for nature conservation and landscape management. The professional basis for these decisions is described in the landscape plan and has to be considered in the process of weighing the interests involved in the preparatory land use plan. The preparatory land use plan is binding for public authorities only.

According to the Federal Building Code, the land use plan is a legally binding document that outlines urban development for a part of a specific municipality. It constitutes the basis for the construction or modification of built structures on a site and the main requirements to be considered in the licensing process for projects in residential areas. As far as open spaces and rivers are concerned, the plan can designate public and private green spaces and bodies of water and define measures for mitigation or compensation of environmental impacts as well as regulating policies on planting and landscaping. The plan must be derived from the preparatory land use plan and is adopted in the form of a byelaw, ordinance or municipal statute.

## Landscape planning

Furthermore, the different levels of spatial planning interests with regard to nature conservation and landscape management are described in landscape planning plans at different planning levels.

Apart from describing and assessing the current and desirable future state of nature and identifying conflicts with the goal of conserving nature and the landscape, the main purpose of these plans is to lay down the aims and requirements as well as the measures required for nature conservation and landscape management. This thus also includes documentation, in both texts and graphics, of the condition of rivers and aims and measures relevant to rivers. Depending on the relevant level of spatial planning, these aspects have to be elaborated for the specific planning space.

According to the provisions of the Nature Conservation Act relevant to the federal and state level, the landscape plans at different levels have to take into account the aims and principles of spatial planning. On the other hand, the plans' contents can be incorporated into the plans for spatial planning within the process of weighing interests which is governed by the Federal Nature Conservation Act and the Federal Building Code. These integrated aspects correspond to the aims and principles of spatial planning and have to be considered also in other planning processes. The procedures for consideration in spatial planning are regulated in each state's Nature Conservation Act. Different approaches have therefore evolved in the individual states.

## Sectoral planning

Apart from spatial planning there are different public policies, e.g. infrastructure, water, waste, forest and agriculture, which require planning at different levels. Sectoral planning is based on relevant regulations, such as the Federal Highways Act, the Federal Water Act or the Federal Forests Act. As sectoral planning is not generally geared towards the structure of different spatial levels and is inadequate when it comes to taking into consideration other interests, coordination and integration of individual sectoral plans is an indispensable function of spatial planning.

In the context of revitalisation projects, sectoral planning in the field of water and nature conservation is of particular importance. Moreover, some fields of sectoral planning also designate specific or protected areas such as contaminated areas, monuments or special soils, which have to be considered in the planning process.

### 1.1.1.4 Analysis of the planning systems in Poland, the Czech Republic and Germany

Table 1.1-2 shows an analysis of the strengths and weaknesses, advantages and disadvantages, positive aspects and negative aspects of the planning systems in Poland, the Czech Republic and Germany with regard to the planning and implementation of urban river revitalisation projects. It is not meant to be complete or all-embracing. However it reflects the experience and the opinions of the experts collaborating on the REURIS project.

Table 1.1-2: Analysis of the planning systems (© REURIS project team).

Advantages/strengths	Disadvantages/weaknesses
<b>Poland</b>	
<ul style="list-style-type: none"> <li>• Hierarchic and complementary four-step structure of authorities responsible for the planning system in Poland</li> <li>• Connects strategic planning with spatial planning</li> <li>• Bottom-up approach: transfers decisive competences concerning spatial management to local administration (communal and municipal)</li> <li>• Slowly increasing involvement of society in the planning process</li> <li>• Significant respect for private property</li> <li>• Obligation to evaluate the influence of plan arrangements on environment</li> <li>• Identification of areas requiring transformation, rehabilitation or reclamation, which facilitates decision-making in the implementation phase</li> <li>• Comprehensive information about the space, indicating possible transformations</li> <li>• Opportunities for local governments and investors to acquire external funds for revitalisation projects, flexibility in formulation of projects through general provisions contained in the documents analysed (no specific inclusion of specific documents)</li> </ul>	<ul style="list-style-type: none"> <li>• No Revitalisation Programme Act on national level</li> <li>• No revisions of the Spatial Planning and Spatial Management Act</li> <li>• Relevant laws are inconsistent and subject to frequent change</li> <li>• Governmental planning system level remains complicated; lacks sufficient enforcement possibilities for implementing strategic decisions; no effective procedures for coupling the system with bottom-up feedback (EUKN, 2005)</li> <li>• Various issues are difficult to introduce properly at the local level; communes have many opportunities to avoid the imposition of unwanted programmes and projects, i.e. through prolonging the procedures for preparation of local plans, delaying social and judicial processes, etc. (ibid)</li> <li>• Long and complicated procedures for the preparation and approval of Local Spatial Management Plans</li> <li>• Fragmentation of Local Spatial Management Plan; some communes prefer to manage space through administrative decisions rather than local plans, due to a misunderstanding of the advantages of flexibility; this leads to space suffering damage and unbalanced development</li> <li>• Vagueness of regional plans</li> <li>• Problem of river valleys regeneration is often omitted in local strategies for town development</li> <li>• Lack of connections between revitalisation programmes and Study of the Conditions and Directions of the Spatial Management of a commune (no “support areas” designated)</li> <li>• Lack of connections between town development strategies and the Study” with plans for water management in catchment areas</li> <li>• “Snatchy” character of social consultation, lack of comprehensive information and appreciation of the significance of environmental revitalisation</li> <li>• Reducing the revitalisation processes perception to built environment</li> <li>• Long-term revitalisation processes versus short terms in elected political office results in populist political decisions and expectation of spectacular effects</li> <li>• Lack of a formal-legal definition of environmental revitalisation</li> </ul>

	<ul style="list-style-type: none"> <li>• Lack of planning tools for achieving high quality landscapes and public spaces</li> <li>• Laws on spatial planning and management do not take into account data compiled in implementing environmental law, i.e. Environmental Protection Law, Water Law, Nature Protection Law and others</li> <li>• Laws on spatial planning and management do not spell out guidelines for balanced spatial management models for regions, cities, districts, villages, post-industrial areas, recreational areas, etc.</li> <li>• Lack of a comprehensive programme of public and private measures for a particular city area: spatial (revitalisation) policy is currently primarily the result of the effects of various levels of public planning, “industry” programmes and operational documents</li> <li>• Industry programmes have a record of non-compliance with the arrangements set out in the development strategies and spatial development plans</li> <li>• Numerous uncoordinated programs and policy documents developed at various levels (national, regional, district and municipal) lead to the ineffective functioning of basic instruments of spatial development management and protection of natural resources</li> <li>• Provisions for the renewal (regeneration) of urban areas are too general and relate primarily to historic urban sites and valuable cultural and natural areas</li> <li>• Lack of provisions and regulations which give equal weight to all aspects of revitalisation, i.e., spatial, social, economic and environmental factors</li> <li>• Lack of developed methods and legal procedures for implementation of revitalisation, renaturalisation of riverside areas</li> <li>• Lack of laws on revitalisation of degraded areas and adaptation of existing legal regulations to reflect the demands of a particular model of revitalisation activities</li> <li>• Lack or superficiality of spatial policies on environmental protection</li> <li>• Goals formulated in policy documents are difficult to enforce</li> <li>• Minimal application of GIS technology</li> </ul>
<b>Czech Republic</b>	
<ul style="list-style-type: none"> <li>• The Czech Republic has formulated National River Basin Plans for its main rivers; these go beyond the requirements of the EU Water Framework Directive.</li> <li>• River basin district plans were prepared with the inclusion of spatial reserves for revitalisation projects developed at the same time.</li> <li>• Flood areas are clearly delineated in the plans.</li> <li>• Since 1992, the establishment of Territorial Systems of Ecological Stability, with the goal of strengthening ecological landscape stability by preserving or renewing stable ecosystems and linkages between them, has been part of Czech legislation.</li> <li>• Revitalisation projects may be incorporated into existing plans during updates or development of new plans; on the land use plan level, municipal councils may approve changes to a land use plan.</li> </ul>	<ul style="list-style-type: none"> <li>• National and regional-level land use plans are developed according to the relatively new Building Act; methodological procedures and clear definitions are lacking; development of materials and plans is not coordinated.</li> <li>• As a result of political turnover every four years, there are changes in regional government priorities and thus changes in land use development principles.</li> <li>• Municipal land use plans are typically developed for ten-year periods but often changed in targeted ways while they are in force. The public has few effective tools with which to influence these changes.</li> <li>• Discrepancies between the opinions of local, regional and national authorities are emerging. Transfer of alternative water management trends from abroad to plans and concepts by the public administration occurs at a very slow pace.</li> </ul>

	<ul style="list-style-type: none"> <li>• In the Czech Republic, the gravity of potential climatic changes continues to be undervalued and water management specialists, forestry engineers, etc. do not take them into account.</li> <li>• Outdated and problematic goals are incorporated into water management plans and strategies.</li> <li>• The National River Basin Plans lack a water management vision for the Czech Republic.</li> <li>• River basin district plans do not include planned revitalisation projects and thus spatial reserves were not created for them.</li> <li>• Due to lack of space in the urban landscape, revitalisation collides with infrastructure and its protection zones, monument protection (technical, historical), and on occasion with plans to protect nature and the landscape. Generally there is insufficient space to deposit material that is removed.</li> <li>• There is not enough public land for revitalisation. Administrators making property adjustments do not include reserves for revitalisation projects, which are almost always complicated by complex ownership issues.</li> <li>• Universities lack programmes that educate future design professionals with a comprehensive perspective on revitalisation and the skills required to implement it.</li> </ul>
<b>Germany</b>	
<ul style="list-style-type: none"> <li>• Option of implementing revitalisation projects is based on an overarching planning concept for urban river spaces, which takes several aspects into account (e.g. the system of surface waters and water barriers).</li> <li>• Planning at different levels allows step-by-step implementation of a project that takes socio-economic benefits and technical restrictions related to spatial and temporal factors into account in determining priorities (integration into a general master plan).</li> <li>• Useful policies and aims specified in different types of plans at different levels can support the detailed planning and realisation process for a current revitalisation project.</li> <li>• One of the main problems in the realisation of projects is the shortage of available land. Individual planning levels can therefore be used to reserve space for revitalisation projects at an early stage of planning. In addition, the comprehensive system of landscape planning provides useful basic information for revitalisation projects (e.g. protected areas, nature conservation aims), especially in landscape plans and local green structure plans.</li> </ul>	<ul style="list-style-type: none"> <li>• The planning system is very complex and heavily regulated. Therefore the planning process for each revitalisation project must take several plans and regulations into account and becomes very time-consuming. This also applies to the complicated licensing process.</li> <li>• Owing to the different requirements of the planning system, realising a bottom-up approach or integrating collaborative procedures in the planning process is difficult. This is especially important in the case of major projects which involve revisions to superior plans.</li> <li>• Finally, a major drawback is a lack of spontaneity and creativity for detailed concepts, due to the system of regulations and requirements (e.g. guidelines for schematic graphics).</li> </ul>

---

### 1.1.1.5 Review on the planning systems in Poland, the Czech Republic and Germany

In the field of spatial planning, the planning systems of all partner states involved in the REURIS project are characterised by at least three different levels:

- federal or state spatial planning,
- regional planning, and
- local urban planning.

In Germany the planning system is based on the federal building code and has been developed step-by-step in recent decades. After industrialisation, environmental aspects such as nature conservation and landscape management, flood protection and retention of storm water flows, revitalisation of rivers and creeks, biotope network planning as well as the development of green corridors and open spaces within densely populated areas became increasingly important. Thus, besides state planning, regional planning and urban planning the instrument of landscape planning has been established at all planning levels. The goal of landscape planning is to describe and assess the current and desirable future state of nature and determine the aims and requirements of nature conservation and landscape management. These aims and requirements are to be taken into account in establishing land use plans that balance and weigh various demands and factors. Nevertheless, implementing urban river revitalisation projects as part of land use plans is not easy, especially within the obligatory land use plans.

In Poland and the Czech Republic, the planning system is based on acts, laws and regulations enacted in the beginning of the twenty-first century. On the backdrop of the problems of spatial planning that these countries faced after the breakdown of the autocratic communistic system, the focus on spatial planning was determined primarily by issues of economic welfare and the need to improve transport systems, rather than by revitalisation projects. As a result, experience with how the planning system influences the planning and implementation of urban river revitalisation projects is limited. But there are very strict regulations on how environmental aspects have to be considered and handled in regional and urban spatial planning. The preparation of studies and documentations is prescribed by law. Moreover, sectoral planning such as the water management plans that comply with the EU Water Framework Directive (Poland and Czech Republic) or planning of the Territorial Systems of Ecological Stability (Czech Republic) is subject to very strict monitoring and can serve as a strong basis for appropriate consideration of environmental aspects in spatial planning on the regional or urban level. Among the problems and disadvantages analysed are the frequent changes in and inconsistency of laws and regulations, inadequate attention to revitalisation aspects in formulating regional and urban land use plans or spatial management plans, vague spatial plans at regional level, discrepancies between the spatial management plans at the different levels, or conflicting requirements and the inappropriate balancing and weighing of different interests. But these problems have to be overcome in Germany as well as in the other countries studied here.

Within all of the states in which REURIS partners are located, the planning and implementation of urban river revitalisation projects are subject to more or less strict rules and regulations as well as demands set by higher levels of spatial planning. Whereas in Germany urban river revitalisation projects are incorporated in part into the plans for spatial planning (top-down principle) and some of the projects planned on an urban or regional level could be implemented within the plans of higher level (bottom-up principle), in the Czech Republic as well as in Poland urban revitalisation projects until today are seldom incorporated into regional or local spatial management plans. So far, there is no known example of how an urban river revitalisation project might be incorporated into a binding or regulatory land use plan (that is, a plan which is binding for all parties and not just for local authorities). Although the planning systems analysed seem to be very complex and heavily regulated and may be difficult and time consuming in practice, planning at the different levels permits step-by-step implementation. Additionally, different policies and aims defined in different types of plans at different levels may in fact support the implementation and realisation of urban river revitalisation projects.



## 1.1.2 Planning criteria and basic planning information

### 1.1.2.1 Superior planning criteria based on European law

All over the EU, urban river revitalisation projects are strongly affected by European directives. Three directives have been identified to be the most important directives for river revitalisation projects:

- **Water Framework Directive:** Provisions for water management according to the principles of sustainable development have been explicitly formulated in directive 2000/60/EC dated 23 October 2000 on establishing a framework for the activities of the EU concerning water policy (the so-called “Water Framework Directive”).
- **Floods Directive:** Directive 2007/60/WE dated 23 October 2007 (the so-called “Floods Directive”) aims to limit flood risk and decrease negative impacts from flood in EU countries. This directive is equivalent to the Water Framework Directive and fully coherent with its provisions.
- **Habitats Directive:** Of significant importance for the ecological structures of river valleys is Article 6 of Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora.

### 1.1.2.2 Planning criteria and basic planning information in Poland

#### Superior legal requirements

In Poland, the Water Framework Directive was transposed into national law by Act dated 18 July 2001 Water Law together with the Act dated 23 November 2002 on changing the act Environmental Protection Law and Water Law (Journal of Laws, 2002, No. 233, pos. 1957) and a number of other executive acts.

Legal acts and programmes connected with the implementation of the provisions of the Water Framework Directive in Poland:

- Act dated 18 July 2001 Water Law (Journal of Laws, 2005, No. 239, pos. 2019 with subsequent changes) together with executive acts, mainly:
  - Ordinance of the Council of Ministers dated 17 December 2002 on inland surface waters or parts of such waters that are public property (Journal of Laws, 2003, No. 16, pos. 149) Ordinance of the Council of Ministers dated 7 May 2002 on classification of inland water routes (Journal of Laws, 2002, No. 77, pos. 695)
  - Ordinance of the Council of Ministers dated 10 December 2002 on inland water routes (Journal of Laws, 2002, No. 210, pos. 1786)
  - Ordinance of the Minister for Environmental Protection, Natural Resources and Forestry dated 20 December 1996 on technical conditions which should be fulfilled by water management construction projects and their location (Journal of Laws, 1997, No. 21, pos. 111)
  - Environmental Protection Law dated 27 April 2001 (Journal of Laws, 2001, No. 62, pos. 627 with subsequent changes)
  - Environmental Protection Act dated 16 April 2004 (Journal of Laws, 2004, No. 92, pos. 880 with subsequent changes)
  - Act on waste dated 27 April 2001 (Journal of Laws, 2001, No. 62, pos. 62 with subsequent changes)
  - Act on the collective water supply and collective discharge of waste dated 7 June 2001 (Journal of Laws, 2001, No. 72, pos. 747 with subsequent changes)
- The National Programme for Municipal Wastewater Treatment Programmes for the protection of water from farming nitrates,
- Programmes for improving the quality of water used to provide people with potable water,

- Programmes of activities included in water management plans in the areas of river basins for achieving environmental goals, and
- Programmes for water monitoring in river basins.

Key legal regulations relevant to revitalisation programmes:

- Act dated 6 December 2006 on the principles of pursuing development policy (Journal of Laws, 2006, No. 227, pos. 1658 with subsequent changes),
- Draft of an Ordinance of the Minister of Regional Development dated 6 August 2007 on supporting revitalisation within regional operational programmes.

Moreover, revitalisation activities in urban areas of river valleys are regulated by the following Polish regulations:

- Act dated 27 March 2003 on spatial planning and development (Journal of Laws, 2003, No. 80, pos. 717 with subsequent changes) with executive acts, mainly:
  - Ordinance of the Minister of Infrastructure dated 26 August 2003 on the required extent of the local spatial development plan (Journal of Laws, 2003 No. 164, pos. 1587)
  - Ordinance of the Minister of Infrastructure dated 28 April 2004 on the extent of the conditions study and directions of spatial development of the commune (Journal of Laws, 2004, No. 118, pos. 1233)
- Construction Law dated 7 July 1994 (Journal of Laws, 1994, No. 89, pos. 414 with subsequent changes)
- Ordinance of the Minister of Infrastructure dated 12 April 2002 on technical conditions which should be met by buildings and their location (Journal of Laws, 2008, No. 199, pos. 1156)
- Act dated 3 October 2008 on access to information about the environment and its protection, on the participation of society in environmental protection and on environmental impact assessment (Journal of Laws, 2008, No. 199, pos. 1227 with subsequent changes)
- Act dated 21 December 2000 on inland navigation (Journal of Laws, 2006, No. 123, pos. 857)

Both local revitalisation programmes and local plans have to take into account the provisions resulting from higher level plans and strategic documents:

- **on the national level:** National Development Strategy 2007-2015 and National Concept of Spatial Management (KPZK),
- **on the regional level:** Voivodship Development Strategy and Voivodship Spatial Development Plan, and
- **on the local level:** Study of the Conditions and Directions of Spatial Development of the City/Commune/Municipality, the City/Commune Development Strategy, the City/Commune Long-term Investment Plan as well as plans and programmes for protection of the cultural heritage and plans and programmes for environmental protection.

## Information available

Available spatial data (in particular, recent geo-referencing data) is characterised by significant variations in the extent of the details, in quality and form. With the current state of spatial information infrastructure in Poland (or rather, the lack of such an infrastructure) serious problems are encountered in finding data and the compatibility of available data and ease with which it can be transformed is limited. The INSPIRE directive dated 14 March 2007, which aims to support activities concerning EU policy in the area of environmental protection or policies/activities, that might influence the environment, offers opportunities for improving this situation. However, implementation of the INSPIRE directive in Poland is not very advanced.

The GMES programme (Global Monitoring for Environment and Security), developed within the 6<sup>th</sup> EU Framework Programme with the participation of scientific institutions from the entire EU, including Poland, facilitates the introduction of spatial monitoring, which will allow for collecting and analysing

information regarding land use, environmental threats, water management, the rationalisation of geographical information systems and others relevant activities.

Table 1.1-3 presents a list of information that is essential for appropriate planning of riverside revitalisation processes by evaluating data availability in Poland and comparing the availability of data in Upper Silesia and Bydgoszcz. The differences in the availability evaluation result not so much from different studies in various regions of Poland, but from the extent of their availability: some detailed data is available in specific departments of municipal and regional authorities, but they are not easily accessible for external organisations, e.g. research institutes or planning consultancy firms.

Table 1.1-3: List of information needed for appropriate planning of revitalisation projects in Poland (© Central Mining Institute)

	<b>Important as an element of river corridor</b>	<b>Important as an element of local catchment</b>	<b>Overall availability in Poland</b>	<b>Remarks on availability in Upper Silesia</b>	<b>Remarks on availability in Bydgoszcz</b>
Boundaries	x	x	Publicly available (incl. www); fees charged for hardcopies and most electronic data; site borders and ownership forms boundaries: fees charged for data	Important gaps: boundaries of local plan areas and of watershed lines	Generally available in scales 1:50000 and 1:100000; gaps: boundaries of watershed lines
Geomorphic features (topography maps, aerial photography, hydrographical network, wetlands, steep slopes, soils)	x	x	Publicly available (incl. www); fees charged for hardcopies and most electronic data	Sufficient resources of topography maps and aerial photography; no systemic information about wetlands; hydrographical network, steep slopes, soils: systemic data only available in small scale (1:50000); detailed data in dispersed sources on local studies	Generally available in a scale 1:10000 (topography maps)
Hydrology	x	x	Data available to the public, mostly subject to fees	Very little current data about hydrological conditions including flows (most of individual water bodies: lack of measurement points)	Available in a scale of 1:10000
Hydrogeology (underground water table level, qualitative and quantitative characteristics of resources, pollution risk, protection)	x	x	Data available to the public, generally subject to fees; systemic data (hydrogeologic maps) in a small scale (1:50000)	1:50000 maps available, lack of publicly available data in a larger scale	Available also in a scale of 1:10000

	<b>Important as an element of river corridor</b>	<b>Important as an element of local catchment</b>	<b>Overall availability in Poland</b>	<b>Remarks on availability in Upper Silesia</b>	<b>Remarks on availability in Bydgoszcz</b>
Flood areas	x	-	Data publicly available	Current data for individual places only	Digital maps available in each scale (1:50000 and 1:10000)
Nature protection (natural reservoirs and other conservation areas, natural monuments, protected species, protected habitats)	x	x	Broad data dedicated to object of formal protection areas and individual objects, random data about species/habitats located outside conservation areas	Information about conservation areas or individual objects dispersed between several offices; some data about protected habitats located in forests; lack of data about protected habitats and species from outside conservation areas and from outside forests	Available
Greenfields (forests, park, complexes of gardens, tree-covered wasteland areas)	x	x	Publicly available data	No systemic data for individual catchments	Available
River morphology	x	-	Government regulation dedicated to methodology of assessment for the needs of preliminary classification of rivers according to WFD implementation needs; RHS (River Habitat Survey) methodology adapted to Polish conditions but not commonly approved; numerous (several hundred) river stretches examined in Poland	Little data, elaborated mainly in CMI; capability for providing analyses exists (RHS surveyor in REURIS team)	Numerous river stretches examined in North of Poland according to RHS methodology

	Important as an element of river corridor	Important as an element of local catchment	Overall availability in Poland	Remarks on availability in Upper Silesia	Remarks on availability in Bydgoszcz
Objects impacting river corridor continuity (structural crossings: water structures, bridges, embankments, pipelines, fences; built areas, culverted river segments)	x	-	Indirect information available via transformation of publicly available data	No systematic information	Available at municipal offices
Land use	x	x	Data available to the public	Data available, however data updating systems function only in some cities; no systemic information for a specific catchment	Available within administration boundaries (not for a specific catchment)
Impervious cover	x	x	No direct data; information available via transformation of publicly available data about land use, spatial planning, degraded areas, etc.; no agreed methodology for the assessment of imperviousness levels	No systemic information	No systemic information
Non-point sources of pollution	-	x	No direct data; information available via transformation of publicly available data about land use, spatial planning, degraded areas, etc.	No systemic information	Available at the municipal office
Point sources of pollution	x/-	x	Data partially available from water permits	No systemic information	Available
Mining impact	x	x	Detailed data theoretically available to the public but dispersed between mining companies and self-government bodies	No systemic information for a whole region or for individual catchments, systemic information in some cities (eco-physiography studies)	Not relevant for this region; however data available about clay open mining; eco-physiography studies within administration boundaries



	<b>Important as an element of river corridor</b>	<b>Important as an element of local catchment</b>	<b>Overall availability in Poland</b>	<b>Remarks on availability in Upper Silesia</b>	<b>Remarks on availability in Bydgoszcz</b>
Cultural heritage sites	x	-	Data available in local development studies and eco-physiography studies	No systemic information for entire regions or for individual catchments	Publicly available data
Sites of implemented restoration in river valleys	x	-	Data publicly available, but no information system about implemented projects	No systemic information	No systemic information
Linear infrastructure	x	x	Data available in local development studies and eco-physiography studies	No systemic information for individual catchments; no system for data updating in most cities or on a regional scale	Available
Ecological quality of water, amphibious, riparian ecosystems	x	-	Developed system of assessment methods and of ecological quality indicators	No current data	Available
Biotope network planning	x	x	No commonly approved methodology, no legislative regulations (EECONET system does not function)	Not implemented	Available: Natura 2000 network
Water body area development conditions (zoning, predictable land use, predictable mining impacts, planned protection areas, demographic trends)	x	x	Data publicly available, but no information system; in general: data on boundaries of individual water bodies unavailable	Data hardly available for individual places; information about predictable mining impact especially difficult to obtain	Available

### 1.1.2.3 Planning criteria and basic planning information in the Czech Republic

#### Superior legal requirements

Since 2001, the Czech Republic has been gradually incorporating the Water Framework Directive into its legislation, specifically into Act No. 254/2001 Coll. on water and its revisions. However, implementation is insufficient and corrections are still being completed. The Czech Republic now faces infringement procedures.

Land use planning and building procedures are governed by the Building Act (No. 183/2006 Coll.). Act No. 254/2001 Coll. on water applies to water structures.

The linkages between both laws and land use planning procedures is governed by the aforementioned Decree No. 500/2006 Coll. on analytic land use planning materials, land use planning documentation and the manner of recording land use planning activities.

Territorial systems of ecological stability (TSES) and interventions into nature and the landscape are governed by Act No. 114/1992 Coll. on nature and landscape protection.

#### Information available

Revitalisation projects must comply with the aforementioned plans and regulations. A needs analysis for revitalisation measures has been developed and evaluations conducted for every river basin (particularly from technical, water management and environmental perspectives). The needs of cities and municipalities are projected into the land use plans of these units.

The situation in a given area is analysed by analytical land use planning materials. Analytical land use planning materials address the condition and development of the area and its values, limits to use of the area and proposed changes to the area. This information is then used as part of SWOT analyses, where it serves to assess sustainable development of an area in the following spheres:

- geological environment,
- water system,
- environmental health,
- nature and landscape protection,
- agricultural land and forest property,
- public transportation and technical infrastructure,
- socio-demographic conditions,
- housing,
- recreation, and
- economic conditions.

The details of the contents of the analytical materials are specified in Decree No. 500/2006 Coll. Materials are available for every land registry area and pursuant to the new Building Act, municipalities and cities are required to update them every two years. Regional authorities and municipalities were supposed to have analytical materials completed by 2009. In places where analytical materials have not yet been developed, professionals working on revitalisation projects must obtain materials themselves from relevant network administrators, forest management offices, authorities and institutions in the fields of sanitation, agriculture, transportation, etc. On the basis of these analytical materials, conflicts and the potential for sustainable development of the area are identified in the analysis phase on the basis of identification points and balances, which provides a complex view of the given area.

---

## 1.1.2.4 Planning criteria and basic planning information in Germany

### Superior legal requirements

#### Planning law

For the planning law or aspects of land law, housing and spatial planning, the Basic Law regulates the concurrent legislative competence of the *Bundestag* (the Federal parliament). Concurrent legislative competence means that German states have the power to legislate as long as and to the extent that the Federal Parliament has not exercised its legislative power by enacting laws. In the context of spatial planning the Federal Parliament has exercised its right of concurrent legislation by adopting the Federal Spatial Planning Act and the Federal Building Code. In the field of spatial planning, the Basic Law additionally provides for the possibility of divergent arrangements for the states, so that State Spatial Planning Acts exist at state level.

Like the planning system, the legal basis for planning regulations is divided into several levels. According to the Basic Law, local authorities have the right to regulate all affairs of the local community in the field of urban planning on their own responsibility within the limits set by law. Local self-government also finds expression in planning autonomy (apart from e.g. financial autonomy, organisational autonomy), which means having political and administrative freedom to decide on land use (cf. Pahl-Weber, Henckel, 2008: 62). Land use plans are also to be prepared by the municipality on their own responsibility as specified in the Federal Building Code. The Federal Building Code is the main regulatory framework for urban planning and contains regulations for urban land use planning as well as regulations in the field of building permissions, expropriation and compensation, urban rehabilitation, urban development and land reallocation. Apart from the Federal Building Code, further legislation such as the Land Utilisation Ordinance and the Plan Notation Ordinance are also relevant.

As described above, apart from the system of spatial planning, there is a specific legal basis for each type of sectoral planning (e.g. Federal Water Act, Federal Forests Act and Federal Nature Conservation Act).

#### Water legislation

The Basic Law also has concurrent legislative competence in the field of water legislation, with an option for individual states to make divergent arrangements. Relevant laws in this realm are therefore the Federal Water Act and the State Water Acts.

Apart from national regulations, water legislation is influenced by the legislation of the EU, which is integrated into national regulations. In keeping with the provisions of the Water Framework Directive, for example, national law requires the achievement of a good status for all waters by 2015. This is to be realised by undertaking detailed analysis and risk management for each river basin (e.g. characteristics, impacts, and remaining deficits in the fulfilment of objectives) as well as establishing river basin management plans and programmes of measures to be taken (cf. ENMaR, 2007: 13ff.). The river basin management plan describes how to reach the objectives for a river basin and includes all the results of the analysis. The programme of measures, established for each river basin district, outlines specific measures to be implemented, taking into account the results of the analyses.

Furthermore, as required by the Directive on Flood Risk Management (esp. with regard to flood risk management plans), a preliminary assessment of flood risks has to be carried out for each river basin district or part of a district. Therefore, maps have to be drawn up identifying all areas that pose a flooding risk and indicating the probability of flooding for each of those areas and any potential damage for local populations, property and the environment. In addition, flood risk management plans for each river basin

district must be prepared. These plans describe appropriate levels of protection as well as any measures required to achieve these levels.

Apart from the European directives, the national Water Acts regulate the licensing process for projects with respect to water as well as sewage disposal, the water management and the designation of protected areas such as “drinking water protection areas” and “spa conservation areas”.

## Nature conservation legislation

As in the field of spatial planning and water legislation, the Basic Law also regulates a concurrent legislative competence with the possibility of divergent arrangements by the states. The Federal Nature Conservation Act and the state nature conservation acts specify objectives and principles of nature conservation and landscape management. Apart from regulations governing landscape planning and environmental planning tools referring to revitalisation projects, it is essential to consider also regulations governing protected areas such as national natural monuments, nature conservation areas and national parks.

In this connection it is also essential to comply with relevant European legislation. The requirements laid down in the Habitats Directive as well as the Birds Directive are incorporated in national legislation. In this context, an ecological network of Special Areas of Conservation and Special Protection Areas, known as Natura 2000, is being established, which helps to maintain biodiversity. In these designated areas measures are to be taken to ensure the conservation of habitats and avoid their deterioration. To this end, individual states have to create appropriate management plans, designed specifically for each site, as well as appropriate statutory, administrative and/or contractual measures, which correspond to the ecological requirements of the natural habitat types concerned and the species on those sites.

## Information available

At the beginning of the planning process, the available information regarding a revitalisation project is to be collected. Table 1.1-4 shows the different kinds of information required for revitalisation projects, divided into the following categories:

- **basic/technical aspects of river spaces:** information required to assess the technical feasibility of revitalisation in general,
- **recreation and tourism aspects:** information required to assess the opportunities for safeguarding the interests of recreation and tourism (e.g. opportunities for improving landscape sceneries, experiencing nature, green corridors, footpaths and cycling paths),
- **human health aspects:** information required to avoid adverse effects on the population,
- **ecological aspects:** information required to assess the possibilities of safeguarding the interests of nature and landscape (e.g. possibility of restoring natural riversides, creating aquatic and semi-aquatic habitats, re-establishing the passability for fish and other animal species, improving biodiversity), and
- **economic aspects:** information required to consider economic interests such as financing, water rights and infrastructure.

Table 1.1-4: Information to be considered and its availability (x= available, (x) = limited available, - = availability unknown or scale not relevant on local level) (© City of Stuttgart, based on Bosch & Partner, 2010).

	Type of information	Availability of information		
		Federal level	State level	Local level
Basics / technical aspects	Systems of surface water	(x)	x	x
	Hydrogeology and construction subsoil	-	-	x
	Hydrological database on discharge and sediments	-	x	(x)
	Hydraulic database regarding areas subject to flooding, incl. historical events	-	x	x
	Development conditions of water bodies and heavily modified water bodies	(x)	x	x
	Discharge regime	-	x	(x)
	Maintenance of waters	-	-	x
	Water pollution load	(x)	x	x
	Land register, incl. watershed area information	-	-	x
	Types of current land use and biotopes	-	-	(x)
Recreation/tourism	Landscape conservation areas	x	x	x
	Noise abatement plan	-	-	x
	Clean air and action plan	-	-	x
	Climate protection programme	-	-	x
	Climate atlas	-	-	x
	Historical maps (historical situation of river)	-	-	x
	Green belts	-	-	x
	Infrastructure for recreation (e.g. footpaths and cycle paths)	-	-	x
	Monuments	-	x	x
	Social structure of population (number of inhabitants, etc.)	-	-	x
Human health	Flood areas	-	x	x
	Potentially and identified contaminated areas	-	x	x
	Drinking water protection areas	(x)	x	x
	Spa conservation areas	-	-	x
Ecology	Nature reserves (nature protection areas)	x	x	x
	Natura 2000 sites	x	x	x
	Natural monuments	-	x	x
	Biotopes under special protection	-	x	x
	Biotope network planning	-	-	x
	Riparian strips	-	-	x
	Diversity of ecological structure	-	x	x
	Endangered species and plants	-	(x)	(x)
	Water (transverse) barriers/ passability	(x)	x	x
	Water quality	(x)	x	x
	Condition of soil	-	(x)	x
Condition of groundwater	(x)	x	x	
Economy	Land register plan / land use plan	-	-	x
	Infrastructure (public supply, disposal, transport)	-	-	x
	Discharges	-	-	x
	Waste land	-	-	x
	Existing water rights	-	-	x



### 1.1.2.5 Analysis of legal requirements and availability of information in Poland, the Czech Republic and Germany

Table 1.1-5 shows the advantages and disadvantages with regard to the special situation in Poland, the Czech Republic and Germany.

Table 1.1-5: *Advantages and disadvantages of legal requirements and availability of information* (© REURIS project team).

Advantages/strengths	Disadvantages/weaknesses
<b>Poland</b>	
<ul style="list-style-type: none"> <li>• Gradual implementation of EU programmes and directives (INSPIRE, GMES)</li> </ul>	<ul style="list-style-type: none"> <li>• Insufficient use of GIS instruments in the process of planning and implementing revitalisation projects in cities and riverside areas</li> <li>• Lack of uniform spatial information system and access to comparable data for specific river basins; many communes lack GIS database</li> <li>• Lack of statistical data at the level of city districts</li> <li>• Low level of implementing integrated planning rules</li> </ul>
<b>Czech Republic</b>	
<ul style="list-style-type: none"> <li>• Data collection and availability of data (analytical land use materials) is regulated by decree.</li> <li>• Analytical land use materials have to be completed by 2009 and updated every 2 years.</li> <li>• Fixed standards for extent, type and quality of data collected and made available to planners.</li> <li>• Data collection is combined with SWOT analysis of the land registry area.</li> </ul>	<ul style="list-style-type: none"> <li>• Analytical land use materials have to be completed by 2009. It is doubtful that all regional authorities and municipalities will have finished appropriate data collection by this date.</li> </ul>
<b>Germany</b>	
<ul style="list-style-type: none"> <li>• Basic information required for revitalisation projects is available from municipal authorities (but this diversity of information is generally not available in smaller municipalities).</li> </ul>	<ul style="list-style-type: none"> <li>• In some cases, there is no comprehensive information available (e.g. on endangered species), even in large cities like Stuttgart.</li> <li>• Access is at times difficult, due to lack of a central authority for managing relevant data; sometimes enquiries must be submitted to a variety of departments.</li> <li>• Some information must be prepared and amended especially for use in revitalisation projects (e.g. information regarding water quality, water rights, social structure).</li> <li>• Lack of suitable information on endangered species</li> <li>• Lack of data regarding the diversity of the ecological structure</li> </ul>

### **1.1.2.6 Review on legal requirements and availability of information in Poland, the Czech Republic and Germany**

The basic legal requirements in Poland, the Czech Republic and Germany result primarily from the directives decreed by the European Commission. With respect to urban river revitalisation projects, the regulations of the Water Framework Directive, Flood Directive and the Habitats Directive are the most important regulatory requirements. Thus, the basic regulations to be taken into account in the EU states involved in REURIS are quite similar, although the directives are transformed in totally different laws by each state. Moreover, national building codes with very specific regulations within the different states must be taken into account, especially when planning river revitalisation projects in an urban context. Thus, project planners must comply with numerous different laws and regulations. For landscape architects and town planners, the different laws and regulations may appear to be a jungle of paragraphs than a logical set of requirements. Nevertheless, the intentions of relevant European and national laws are compatible with and support the aims of river revitalisation projects, even in an urban context. Indeed, the need to comply with European directives has forced states to improve national laws and regulations with regard to the implementation of river revitalisation. On the basis of national building codes and building acts, urban river revitalisation projects can be implemented in spatial planning (land use management plans) at different levels, a process which facilitates realisation of such projects. Whereas in Germany the implementation of revitalisation projects is incorporated into different levels of urban spatial planning (preparatory land use plan, binding land use plan), in Poland and the Czech Republic revitalisation projects are only in a few cases implemented in land use plans and regulatory plans.

The information needed for revitalisation projects could be identified quite clearly on a national level. Within the REURIS project, a transnational list of relevant information needed for appropriate project implementation and realisation has been compiled (see Guidelines for urban river revitalisation, Manual Part 1, chapter 1.4). But the question as to which type of information is required has to be decided in each individual case and depends, for example, on the details relevant to any particular situation as well as the nature and complexity of the project. In some cases (e.g. if information is out of date or not available in a comprehensive form), additional research is necessary to guarantee that the information is appropriate to the planning process and to ensure legal reliability for the licensing process involved in a project. As a rule, this is necessary if a certain type of information is subject to rapid change or is generally not available in adequate detail (e.g. occurrence of species, types of land use and biotopes).

In Poland, the Czech Republic and Germany there are big differences in the availability of the information needed. In the Czech Republic data collection and availability of data is regulated by decree. So-called analytical land use materials had to be completed by 2009 and updated every two years. Standards for extend, type and quality of data collected and available for planners are fixed. In Poland it seems to be rather difficult to obtain adequate information from agencies, administrative offices or local authorities. What kind of information is available depends on the local situation. But there are efforts to improve the system of data collection, data preparation and the types of data available in future. Germany has also not yet established a coherent system of data collection. There are defined requirements, but the process of collecting and preparing data and making it available is still underway, making data based on GIS available will be achieved step-by-step. Nevertheless, much of the data needed for any revitalisation project today can be provided by the respective administration and local authorities, but data collection and preparation is a task that must be carried out by the planners conducting the respective project.

## 1.1.3 Planning methods

### 1.1.3.1 Planning methods in Poland

#### State of the art and description of planning methods

The use of various planning methods depends on:

- the size of the area and the details of the problem,
- the main goals (economic, social and/or ecological), and
- the state of the planning process.

The following phases can be distinguished in the planning process:

- analytical-diagnostic phase
  - analysis and evaluation of current status
  - diagnosis of current status, identifying problems
- creative-decision-making phase
  - setting and prioritising goals
  - searching for alternative solutions
  - ex-ante evaluation of consequences
  - choosing the solutions
- implementation and ex-post evaluation phase
  - implementation of the plan
  - monitoring and implementation control

In spatial planning, qualitative methods as well as quantitative methods are used. The most common methods are:

- **Qualitative methods:** analytical and descriptive, e.g.: description method, selection method, further eliminations and approximations method, historical analysis method, urban and landscape stocktaking method, aerial photograph analysis method (orthophotography), SWOT method, comparative analysis method, environmental scanning method, multi-criteria method, various methods of landscape valorisation (quality evaluation), e.g. architectural-landscape units method JARK for planning scale and WARK for architectural-urban scale, space-time sequences method of K. Wejchert, K. Lynch method, Trieb method, etc.
- **Quantitative methods:** e.g. economic calculus method, mathematical, statistical and economic methods, e.g. for economic valuation of environment the following methods are used: costs-benefits analysis, cost-minimisation method, travel costs method, illness costs method, hedonic price method, human resources method, declared preferences method, contingent valuation method, etc.

Both in qualitative and in quantitative analysis taxonomic methods are used for classifying and analysing data, mostly in social-economic research (e.g. Hellwig methods, agglomeration methods, statistical diagnostic-forecasting methods, etc.). Cartographic methods, such as methods for preparing or using maps, play an equally important role in planning.

Development plans are prepared in different scales depending on the type of plan and the form of the elaboration:

- national plans 1:1000000, 1:500000,
- regional plans (macro- and micro-) 1:300000, 1:200000, 1:100000,
- detailed regional plans 1:100000, 1:50000, 1:25000,
- local plans 1:10000, 1:5000 and bigger, and
- implementation plans 1:1000, 1:500 and bigger.

River Habitat Survey (RHS) is a method developed for morphological evaluation of rivers that is increasingly applied.

In the analytical-diagnostic phase of planning most of the above-mentioned methods are used. In the creative–decision-making phase CAD and GIS techniques are introduced for modelling variant solutions. Choosing the optimum variant is done with the help of the scenario method and multi-criteria analysis. Decisions are supported with ex-ante evaluation methods (e.g. contingent valuation method); evaluation of the influence on the environment and of economic justification employs hedonic price methods and feasibility study methods. Solutions are subject to social consultations. Methods for monitoring and evaluating implementation results in the implementation phase (e.g. hedonic pricing methods useful in ex-post evaluation) are still not very common.

Both in spatial planning and designing, useful integrated methods and system tools (CAD and GIS) exist for preparing full technical documentation of areas and buildings. Data accumulation and its subsequent processing with, for example, GIS tools allow precise ex-ante and ex-post evaluation of city revitalisation processes. However, use of GIS in Poland is still marginal.

## The significance of informal plans

On the local level, there is a large information gap between the two types of formal planning documents, the Study and the local plans or MPZP. In the past the functional-spatial structure of an entire city was defined by the general plan. Now the Study is supposed to fulfil this function. Yet in many communes this document includes only very generalised guidelines, whereas the local plans cover only a miniscule part of the commune (or city). This gap is filled with a number of informal plans and projects, conceptual, study, industrial, which are not formally categorised.

Plans are prepared for the following purposes:

- to develop a strategy and scenarios for urban development (urban development plans, local development plans, direction plans, plans for sectoral policies in the social sphere, transport, environmental protection, tourism and recreation, housing, economic development, etc.),
- to protect the natural environment (e.g. planning studies for management of river valleys at a regional and local level, plans for creating green structures and open areas in cities),
- to protect the cultural environment (e.g. plan for protecting monuments, plan for developing the landscape and protecting city panoramas),
- to optimise transport system (plans for bicycle paths, public transport, concepts for communication infrastructure in the city), and
- to develop technical infrastructure (plans for developing sewage systems, electrical power networks, telecommunication networks, water systems, etc.).

With regard to the activation and implementation of revitalisation processes, the most relevant informal plans are Local Revitalisation Programmes. Unfortunately, in Poland there is no systematic experience with implementing integrated programmes of urban and natural revitalisation.

**Local Revitalisation Programme:** This document was prepared based on the provisions of the National Strategy for Regional Development 2001-2006 and other planning documents. The Local Revitalisation Programme was created to rectify the lack of Polish laws or regulations that were analogous to the structures and procedures established in other EU countries. The programme involves a description of the elements that characterise the current situation in the commune examined, elaborates the main assumption of the revitalisation programme, establishes the activities planned, describes the methods and sources of financing for these tasks, presents the implementation system and spells out how implementation of the programme will be monitored. The Local Revitalisation Programme and Local Development Programme are valid documents which should be attached to funding applications submitted to EU structural funds for projects aimed at revitalising degraded post-industrial areas.

**Municipality Restoration Plan:** The Municipality Restoration Plan is one of the most important tools for renovating villages, enhancing their development, improving the quality of life and working for their inhabitants. The legal basis is the Regulation of the Minister of Agriculture and Rural Development dated 14 February 2008 on particular conditions and procedures for granting financial support within the action Village Renewal and Development under the Rural Development Programme for 2007-2013 (Journal of Laws, 2008, No. 38, pos. 220). Creating and enacting such a plan is an indispensable requirement when applying for financial aid from the Village renewal and Development programme. It also offers the relevant authorities guidelines in establishing the directions of development for the areas involved. Preparing a Municipality Restoration Plan requires extensive social consultations. The plan cannot reflect the ideas and proposals of a small group of people. It should be a document that is accepted by the inhabitants of the municipality in question. The local communities should establish priorities and orientations directions for the development of their municipality, their local resources and their needs as well as point out investments which will help activate local inhabitants for at least a seven-year period. On this basis, applications for European funding can be submitted. Activities outlined in the plan must aim to increase the quality of life in rural areas, satisfy social and cultural needs of the inhabitants and promote the development of rural areas. Moreover, they should work towards the development of rural community identity, preserve the cultural heritage and specificity of rural areas and enhance the area's attractiveness for tourism and investments. The Municipality Restoration Plan should take many things into consideration, including:

- key features of the municipality,
- an inventory of the resources that can contribute to restoration of the municipality,
- an evaluation of the strengths and weaknesses of the municipality, and
- a description of planned investment tasks and measures designed to activate the local community for a period of at least seven years.

## The significance of competitions

Competitions connected with the revitalisation of urban riverside areas are usually organised in Poland as a result of city government's initiatives in cooperation of professional organisations, most frequently architects – the Union of Polish Architects (SARP) and urban planners – the Society of Polish Town Planners (TUP). In the area of landscape architecture, relevant organisations are the Association of Landscape Architecture “Zieleń Polska” and the section of landscape architecture within the SARP. Architectural, architectural-urban and urban competitions are aimed at selecting the best propositions for spatial solutions among studies covering the same range, prepared at the same time and based on homogenous competition rules described in the regulations, which are the foundation for evaluating competition projects.

Three kinds of competitions are organised most frequently:

- **idea (study) competitions**, which aim at selecting the best concept for program-spatial development of a selected area; the ideas of the winning concept are often taken into consideration when preparing a local spatial development plan or preparing a realisation project;
- **realisation competitions**, which aim at selecting the best design together with the necessary data for its implementation (usually the investor commissions the winner to implement the design, though this is not a rule); and
- **design-offers competitions**, which aim at selecting a team that will be commissioned to prepare project documentation.

Differentiation of competitions according to their form includes:

- **open competitions:** open to the general public, allowing for participation of all interested parties, sometimes aimed at a particular group of designers (e.g. students or professionals), with one or more stages, entirely open (rarely) or requiring earlier application, sometimes with a preselection of participants (two stages); and



- **closed competitions:** directed at a defined group of authors or author teams between three to eight (cf. Kopiesz-Unger, 2000) participants (participation by invitation or after submitting intention of participation).

Differentiation of competitions according to their range includes:

- **local (limited):** limiting the availability to a certain territory (e.g. region, city, etc.) or environment and type of participant (e.g. students, architects, urban planners, members of a particular association, etc.);
- **national:** aimed at potential participants in all of Poland; and
- **international:** assuming participation of interested people from the entire EU and the world (such competitions, declared by the Presidium of the Board of the Chamber of Industry, have to be compliant with the regulations of international industry federations).

Table 1.1-6: Strengths and weaknesses of competitions in Poland (© A. Januchta-Szostak).

Types of competition	Strengths	Weaknesses
Idea/study competitions	<ul style="list-style-type: none"> <li>• Opportunity for obtaining unconventional, innovative solutions and a comparison of different options for managing a given area</li> <li>• Successful submission can be used in subsequent social consultations.</li> </ul>	<ul style="list-style-type: none"> <li>• Vague or poorly defined competition guidelines can lead to irrational design solutions.</li> </ul>
Realisation competitions	<ul style="list-style-type: none"> <li>• Opportunity for comparing and evaluating different aspects of design concepts, thanks to the detailed studies</li> </ul>	<ul style="list-style-type: none"> <li>• Author of the successful submission is sometimes not commissioned to prepare the project documentation (usually due to the high cost of realisation).</li> </ul>
Design-offers competitions	<ul style="list-style-type: none"> <li>• Opportunity for comparing experience and skills of potential project executives</li> </ul>	<ul style="list-style-type: none"> <li>• The price of the study is frequently the main criterion of evaluation.</li> </ul>
Open competitions	<ul style="list-style-type: none"> <li>• Democratic form that allows all designers to take part in shaping important city areas</li> </ul>	<ul style="list-style-type: none"> <li>• Large number of submissions of diverse quality</li> <li>• Time-consuming evaluation</li> <li>• Sometimes lack of satisfying results</li> </ul>
Closed competitions	<ul style="list-style-type: none"> <li>• Small number of professional teams with significant achievements guarantees the highest level of work</li> </ul>	<ul style="list-style-type: none"> <li>• Very small number of invited designers does not increase competitiveness.</li> <li>• Criteria for choosing invited teams can arouse controversy and suspicions of bias.</li> </ul>

## The process of weighing and balancing various demands

Urban riverside areas are spaces where various goals come into conflict with one another: social and economic constraints, spatial issues, the need to develop communication infrastructure and the protection of the natural environment and the continuity of valley corridors. The priorities for actions which are set at the level of strategies for urban development and the Study, do not always include the need to revitalise river valleys in cities. Also, the goals of Local Revitalisation Programmes (LPR) are usually determined by socio-economic factors that result to a large extent from the possibility of obtaining funds from the Integrated Regional Operational Programme (IROP 2004-2007) and Regional Operational Programmes (in the current funding period 2007-2013). The formulation of revitalisation tasks is therefore to a large extent subordinate to the priority aims described in regional programmes; the analysis of the actual need for improving city structure and the quality of the natural environment often plays a less important role.

## Environmental planning instruments

Environmental impact assessment (EIA) in Poland has a tradition extending back to the 1980s. Since the 1990s, the main incentives for its evolution were the need to achieve harmonisation with the legal requirements of the EU as well as other international conventions. The Polish EIA concept has changed substantially since 2000. At present, it is a process consisting of specific stages (screening, scoping, etc.), of which public involvement constitutes an integral part (Woloszyn, 2004). Woloszyn examines the evolution of the concept and legal framework for the EIA process in Poland and their potential influences on an effective EIA practice in the country. This issue is also analysed by Wiszniewska et al. (2002).

EIA is an evaluation conducted by an expert appointed from a list compiled by the appropriate Minister. Such an evaluation is required if a particular undertaking is considered to be of special social-economic value; concerns the building-up and developing of an area for investment, especially one that is potentially harmful to the environment and people's health or for an investment that could worsen existing condition; and when an application has been submitted for a business permit pertaining to the industrial exploitation of natural resources.

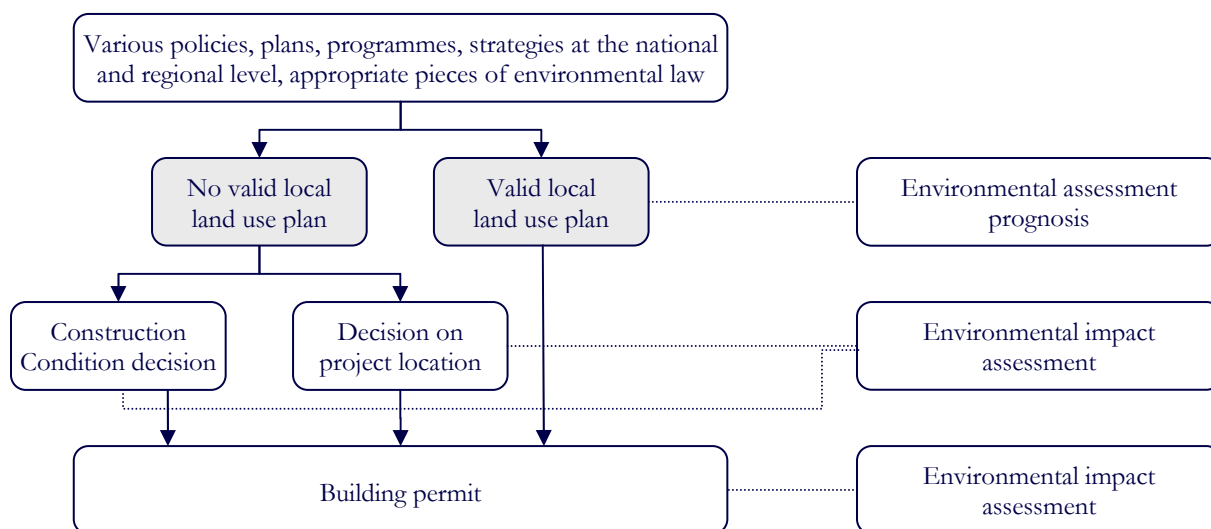


Figure 1.1-5: Environmental assessment and the land use planning system in Poland (based on Woloszyn, 2004).

An Environmental Impact Assessment is obligatory in the process of preparing a local spatial management plan.

The obligation of preparing environmental impact assessment in Poland is due to:

- Act dated 27 April 2001, Environmental Protection Law,
- Act dated 27 March 2003 on spatial planning and development,
- Act dated 10 April 2003 on special principles of preparation and implementation of investment regarding national roads,
- Act dated April 2004 on environmental protection, and
- Act dated 3 October 2008 on exposing information about environment and its protection, participation of the society in environmental protection and evaluation of the influence on the environment.

According to a draft revision of the Act on Spatial Planning and Development the proposed changes to the act are intended to improve the efficiency of spatial planning by abolishing ineffective administrative procedures, by proposing additional planning measures that meet variable needs and conditions and by integrating environmental impact assessments with the procedures for planning and determining the investment sites (cf. Sęk 2008).

---

## Procedures, planning processes and documents required to obtain a licence

Projects designed to revitalise urban river valleys areas may require:

- preparing or changing local spatial development plans,
- preparing an environmental impact assessment,
- preparing a feasibility study,
- reaching agreements with industry,
- obtaining a water permit, and
- obtaining a building license.

Prior to realising investments in riverside areas specific planning documents are required and design agreements must be reached with the Regional Board of Water Management (RZGW). These involve:

- coordinating (opinionating) the study of the conditions and direction of the commune's spatial development with respect to the development of areas exposed to floods;
- coordinating Local Spatial Development Plans with respect to protected areas of water intake, protected inland water reservoirs and areas exposed to floods;
- coordinating decisions on land development conditions for enterprises which require a water permit issued by a voivode; and
- coordinating decisions on the location of public utility investments for enterprises which require a water permit issued by a voivode.

According to the provisions of Water Law (Journal of Laws, 2005, No. 239, pos. 2019, art. 122.1.) a water permit is required for (among other things):

- regulating waters,
- reshaping land adjacent to waters when this influences the water flow conditions,
- producing water machines, and
- constructing buildings and performing other work.

A water permit must be obtained before obtaining a building license.

## Detailed planning and working planning

Implementing investments connected with revitalisation of urban river spaces requires design studies (conceptual and implementary) in the areas of urban planning, landscape architecture and sometimes also architectural projects for buildings and hydro-technical objects; also necessary for appropriate industrial documentation.

Project documentation should occur in consultation with the Project Documents Approval Unit (ZUD in the commune/municipal administration) which will pinpoint all sectors with which the project should be coordinated, e.g. waterworks, sewage, gas, telecommunication, electric power, urban green areas, etc.

Depending on the character of the area included in the project, the documentation may require coordination with or the opinions of:

- Regional Board of Water Management (RZGW) for projects which require a water permit, for developing protected areas of water intake, for protected inland water reservoirs and for areas exposed to floods;
- voivodship or city heritage conservator regarding objects designated as cultural landmarks or areas under conservatory protection based on the provisions of local spatial development plans;
- voivodship nature conservator regarding areas under protection based on environmental protection regulations;
- starost regarding farm and forest lands as well as drainage and irrigation;

- appropriate Office for Inland Navigation regarding permits for using inland water routes; and
- appropriate road administrator regarding areas adjacent to a road or proposed road included in a local spatial development plan.

The lack of integrated planning systems in Poland makes it necessary to go through a complicated and time-consuming process in coordinating project documentation. Should the representative of one authority submit comments on the project, then after correcting the documentation, the whole process has to be started over from the beginning.

However, integrated methods and tools (software) for preparing full technical documentation of buildings are helpful.

---

### 1.1.3.2 Planning methods in the Czech Republic

#### The significance of informal plans

Preliminary studies are developed during the planning phase. Preliminary studies for revitalisation projects have been commissioned in the Czech Republic only in the past few years. Depending on the content of the projects, either query studies or feasibility studies are used in the Czech Republic.

Feasibility studies are developed most often for projects that will be financed with EU structural funds. Applications to EU structural funds require a feasibility study as an annex along with the land use decision. These targeted feasibility studies follow a predetermined outline that is specified by the conditions of the EU structural funds call for proposals. The results of the feasibility study serve as baseline material for obtaining a land use permit. Under local conditions, they are used for projects on water course sections of four to ten kilometres.

The content and structure of query studies are undefined.

Beside feasibility studies and query studies, there is a range of informal plans and studies in the Czech Republic whose content and form is not predefined and depends on the purpose of the study. These plans are used also for revitalisation projects.

#### The significance of competitions

Architectural competition is a term used explicitly for a specific, proven type of competition with a long tradition. The goal of an architectural competition is to obtain the best design solution for a project of any scale: from an interior design, to a building design, to an urban design plan for a specific area. Competitors submit designs in the detail level specified by the assignment and a qualified jury chooses the best solution for the given assignment. Architectural competitions are governed by rules set by the Czech Chamber of Architects, which also helps prepare competition announcements and evaluate the objectivity of competitions.

Competition announcements must comply with the provisions § 102-109 of Act No. 137/2006 Coll. on public contracts so that the competition winner does not have to later undergo a selection process for the same documentation (which used to be the case).

Competition juries are composed of dependent and independent members. Dependent members have a direct relationship to the given project and are typically representatives of the investor, e.g. if the investor is a municipality they include politicians, representatives of the relevant department and the authority issuing approval, etc. Their task is to monitor the suitability of the design with respect to the investor's plans, requirements and limits. The foremost task of independent jury members is to evaluate the architectural quality of designs and these members are therefore licensed architects. The jury meets initially just after the tendering competition terms have been prepared in order to approve them.

Competitions may be divided into two main types according to the tendering method: a non-anonymous invitation to submit design proposals or the opposite, a public anonymous call. In an anonymous competition, as the title suggests, the names of the competitors are not known prior to the competition and participation in the competition depends purely on their own interest. Competitors submit their projects without stating the name of the designers, designs are evaluated anonymously using a numbering system and the names are revealed only after the results are finalised. The aim of this method is to find the best design without regard for the designers' previous merits. The architectural community considers this to be the best selection method for the aforementioned reason. In the case of an invitation-based competition, invited participants submit designs (although uninvited individuals may also submit designs) and participants are typically selected on the basis of their previous experience. This type of competition usually has a simpler procedure, but even so it offers the investor a selection of several different solutions.

Aspects of architectural competitions are:

- Architectural competition provides several points of view on possible solutions to the given assignment, from which the jury tries to choose the best as the winner.
- Evaluation focuses on the designs, independent of the designers themselves (decisions are made about solutions rather than about individuals).
- Decisions are not based on the past “merits” of individuals but on the basis of the current approach and the ability to offer the most interesting and highest quality solution.
- An effort is made to prevent manipulated selection to the greatest extent possible (mainly true for anonymous competitions).

Table 1.1-7: *Strengths and Weaknesses of competitions in the Czech Republic (© City of Brno).*

Strengths	Weaknesses
<ul style="list-style-type: none"> <li>• Equal chances,</li> <li>• Opportunities for obtaining a contract for project documentation that offers the best solution and wins the competition,</li> <li>• Advanced evaluation tools,</li> <li>• Opportunities for young architects and those new to the area,</li> <li>• Thorough and ingeniously defended anonymity, which supports freedom in decision-making,</li> <li>• Prizes as a proven motivational element ,</li> <li>• Guaranteed respect for authorship and intellectual rights,</li> <li>• Effective tools against manipulation,</li> <li>• Long tradition of continually improved methods,</li> <li>• Qualified solutions of potential (procedural) disputes, and</li> <li>• Very advanced transparency (almost everything is later publicised).</li> </ul>	<ul style="list-style-type: none"> <li>• Administratively and organisationally demanding (at least six months’ preparation time),</li> <li>• High cost (competition preparation, jury, prizes: in the range of 1% of anticipated investment or of budgetary funds allocated for implementation of the competition project, subsequent exhibit, etc.) ,</li> <li>• Low usability of winning designs: long time between announcement of the competition and implementation of the investment (often there are changes to requirements and needs in between and the construction project is not implemented according to the winning design),</li> <li>• Independent selection committee, not accountability to the investor; thus often evaluates the architectural aspects of the design (aesthetically) without regard for resolution of spatial, operational, technical and material parameters of the design, and</li> <li>• Problems with intellectual rights to designs (intellectual rights are the property of the designers).</li> </ul>

## The process of weighing and balancing various demands

Over the entire course of the twentieth century, there was pressure on water courses and their flood plains from both the urban and open landscape. Industry, urban development and large agricultural businesses demanded space for their activities. Returning rivers to their natural state is a relatively new trend in the Czech Republic, with many more projects implemented in the open landscape than in the urban landscape.

Technical and ecological requirements for revitalisation projects were clearly defined in the River System Restoration Programme (1992). Fulfilling the technical components of these parameters was the main achievement in the 1990s but today project solutions are achieving high quality in terms of ecological functions as well. Social, recreational and other functions are assessed and valued only occasionally.

Priorities and goals are determined by:

- the strategic documents listed above,
- the investor’s aims, and
- the requirements of the donor/investor of the revitalisation project (sufficient funds from the EU structural funds have been set aside for currently and future use and project goals accommodate the parameters of calls for proposals from these funds).



---

## Environmental planning instruments

Environmental impact assessment (EIA) is governed in the Czech Republic by Act No. 100/2001 Coll. on environmental impact assessment and is based on systematic review and evaluation of potential environmental impacts. The purpose is to identify, describe and evaluate anticipated environmental and public health impacts of plans and concepts in a complex manner and in all decisive aspects. The purpose of the process is to reduce unfavourable environmental impacts stemming from the implementation of plans.

Projects evaluated in EIA processes are for example, building projects, roads, manufacturing plants, operations for mining raw materials and operational premises and include newly built projects as well as modifications, i.e. expansion, changes in technologies, increases in capacity, etc. The EIA process always takes place prior to plan approval and implementation. The permitting authority (e.g. building office) is not allowed to make a decision on permitting a plan without the results of an EIA process.

The strategic environmental assessment (SEA) process is used to evaluate concepts. The SEA process evaluates strategic planning documents on a national level (development concepts and programmes), regional level (land use development principles) and local level (municipal land use plans).

Compensation measures as reimbursement for damages caused by implementation of a project are generally not imposed. However, there have been several cases where compensation measures were imposed on investors of large buildings such as hypermarkets, industrial buildings, etc. Experience shows that the most effective compensation measure is implementation of a revitalisation project in the same municipal land registry area in which the project is implemented.

## Procedures, planning processes and documents required to obtain a licence

If a specific revitalisation project can be characterised as a construction project, the decision on whether the project will be approved is reached by the building office pursuant to the administrative regulations and the building act. The investor must obtain a land use decision and then a building permit. Prior to entering the proceedings, it is useful to ascertain whether the proposed project falls into one of the project categories requiring environmental impact assessment.

Generally, a land use decision grants permission to use a location for a proposed construction project or approves a land use change for a particular property. A building permit evaluates whether the submitted documentation (for a construction project) satisfies the technical building requirements.

If the revitalisation project can be characterised as a water works project, the decision on implementation of the revitalisation project is issued by the water management authority pursuant to the administrative regulations, the building act and the water act. Protection of water ecosystems and water-dependent ecosystems must be taken into account in reviewing submissions pertaining to water works, changes to water works, changes to their use and their removal. Such water works should not obstruct the migration of fish and water-based animals in either direction of the water course.

Issuance of a land use decision requires, above all, submittal of documentation on the proposal, the property title (or the contractual right to carry out the construction project or measures, or right corresponding to a charge on land regarding the property or construction project), if the building office cannot verify such a right in the land registry), statements by the municipality, network operators and owners of affected properties, maps, and an environmental impact assessment if required by the proposed project.

Issuance of a building permit for a water work requires statement of consent with the land use proposal, property title (or contractual right to carry out the construction project or measures, or right

corresponding to a charge on land regarding the property or construction project), if the building office cannot verify such right in the land registry), project documentation developed by a licensed engineer, water use permit, statement by the water course manager, maps, document confirming payment of administrative fee, etc. Maintenance work and reconstruction of water works are considered building modifications and the water management authority must be notified of such work. Notification is also required for renewal of water works destroyed by natural disasters and accidents.

## **Detailed planning and working planning**

Implementation of the construction project takes place on the basis of an issued building permit. Other elements of the implementation phase include preparation of construction documents, selection of a construction contractor, implementation of the construction project by the contractor, implementation according to the prepared documentation, supervision by the designer during construction, which ensures that implementation proceeds according to the architect/engineer's design, and the investor's technical supervision.

### **Construction documentation**

This phase lies on the threshold between the planning process and its implementation. The goal is to create the most exact documentation possible, which will serve for precise implementation of the construction project. This includes documentation relating to various special sectors (water and sewage, landscaping, low and high voltage electricity, etc.), as well as the listing and specification of different types of products (masonry, carpentry, locksmithery, fine metalwork, etc.) along with an itemised budget that can be used to create materials for the selection process.

In most cases the designer from the previous phase develops the implementation documentation, but in some cases this phase is merged with the subsequent one and the implementation documentation is then developed by the implementation firm. The advantage of this method is that implementation is planned with consideration of the given firm's possibilities. The disadvantage is loss of the designer's control over the design details and implementation methods. This method is possible only with larger construction firms that have their own in-house design department.

### **Selection of a construction contractor**

Selection of a contractor is governed by terms corresponding to commissioning of public contracts. The price is set based on the documentation and, primarily, a blank itemised budget, which invited firms use to set the price. As in selection of a designer, in choosing a contractor the quality of the work is an important factor to be considered along with the price. Quality of work can be ascertained through references, which can be listed as an evaluation criterion.

### **Implementation of a construction project**

Only firms authorised by relevant legal regulations can implement construction projects. For investment projects using public funds, usually a single contractor implements the project and is responsible for implementation of the entire project, hiring specialised subcontractors for some work (e.g. carpentry, fine metalwork, locksmithery, masonry and landscaping). The general contractor is thus responsible for the quality of the entire implemented project.

---

## Supervision by the designer during construction

This type of supervision is always secured by the author of the project documentation, the architect/engineer, and its purpose is to ensure that when the project is implemented the design is adhered to as closely as possible. In the case of changes to various parts of the construction project (e.g. a different type of material is used), it is the architect/engineer who approves the change to ensure that the character of the project is maintained.

## Investor's technical supervision

The technical supervision by the investor ensures a professional monitoring of the implementation and protects the investor's interests during the construction.

With regard to different planning sectors, the following conflicts may be identified as relevant to revitalisation projects:

- In the urban landscape, lack of space leads to revitalisation projects may collide with infrastructure and its protection zones, preservation of technical or historical landmarks and occasionally with nature and landscape protection.
- As a rule there is insufficient space to deposit removed materials.
- Localisation of technical networks in cities is often directed toward the areas around water courses; flood plains are not respected.
- The issue of brownfields enters into planning in a number of cities, bringing with it specific issues: ownership, environmentally contaminated sites, and investors' preference for building on "greenfields" rather than revitalising existing sites. Revitalisation of brownfields presents both opportunities as well as obstacles.
- During approval processes, the issue of establishing a group of participants affected by the process arises. The building act does not adequately define who should be included in the group of procedure participants and leaves this to the discretion of the authorities. Water dispersal during flooding may affect a property owner far from the banks of the water course or from properties adjacent to the water course.

### 1.1.3.3 Planning methods in Germany

## The significance of informal plans

### Processes and procedures

Planning approaches which are generally described as “informal” are characterised by non-formalised, non-binding procedures or by their focus on achieving consensus. As far as possible, informal planning approaches seek to eliminate or resolve conflicts by way of consensus or proceed on a collaborative basis prior to the initiation of formal and legally binding planning procedures. Informal approaches also facilitate later planning actions by virtue of involving stakeholders such as owners or the interested public very early in the planning process. This approach gives stakeholders an opportunity to raise any concerns or ideas.

Informal approaches are practised at all levels of spatial planning in Germany. They are characterised by transparent, targeted processes of participation. The participation can take place on different scales and levels (e.g. participation of the public, professionals, authorities).

Working stages referring to the informal planning process and the planning methods used for these stages are shown in Figure 1.1-6. In the process of drawing up new plans at different stages, it often happens that new information, ideas or concepts emerge which had not yet been considered previously. These new aspects can have an effect on earlier stages as well, making it necessary to re-consider the conclusions arrived at in those stages, and this approach tends to apply throughout.

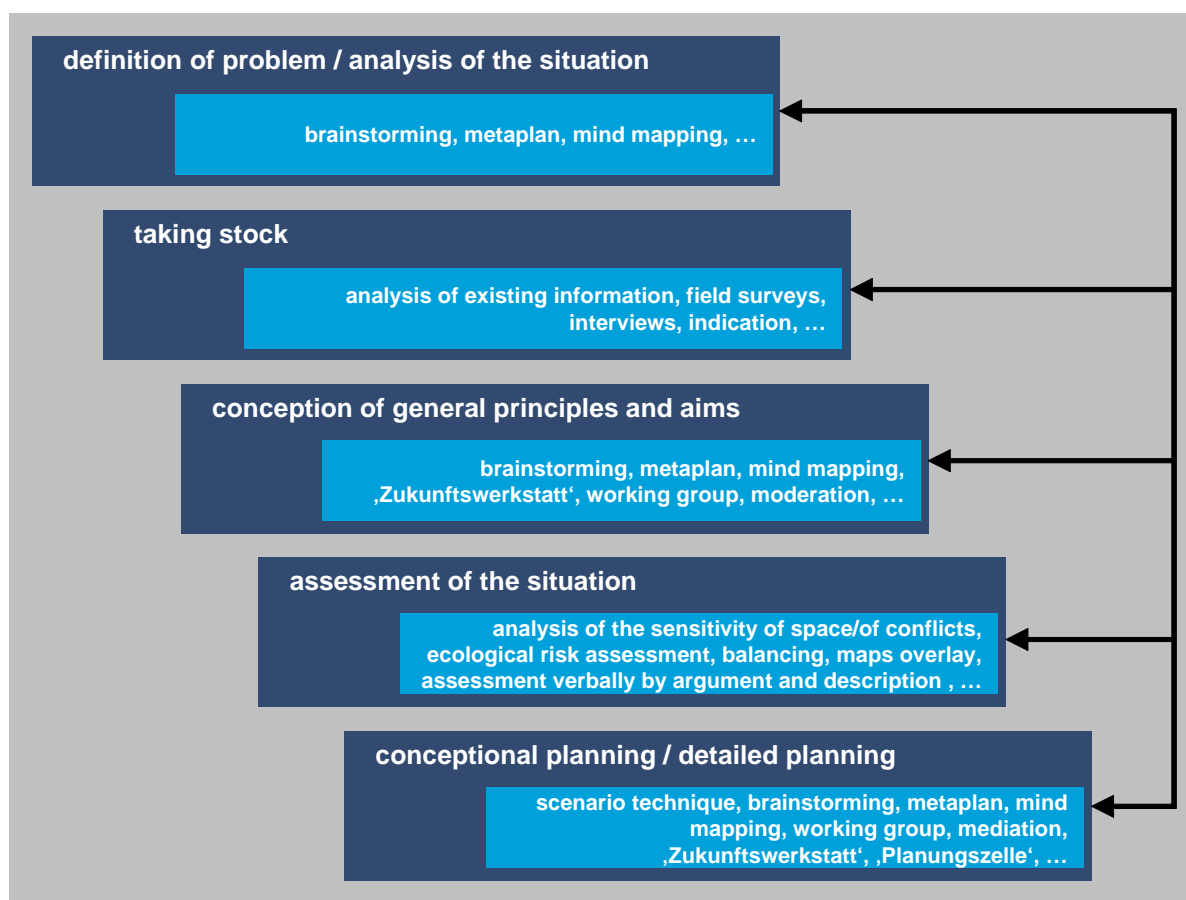


Figure 1.1-6: Working stages and planning methods of informal planning (© City of Stuttgart, based on Bosch & Partner, 2010).

The methods used in different working stages can be divided into two main categories: methods for the planning process as such and methods for the management of planning. The methods referring to the planning process are generally used in working stages such as ‘taking stock’ and ‘assessment of the situation’. In addition to methods which analyse the existing situation such as analysing existing information, field surveys, interviews and using indicators to assess a situation, several methods are used to analyse relationships of cause and effect in order to identify conflicts between different space-related interests or to assess the sensitivity of different elements with regard to the environment or socio-economic aspects. In the management of planning it is possible to apply various methods for structuring the planning process or for stimulating creative processes. Brainstorming, metaplan and mind mapping can be used, for example, to facilitate first ideas in a planning process. They are characterised by an open process that ignores the different positions of participants, any detailed information, regulations or the requirements of the project. First ideas can be written down on cards and, as a rule, the process is limited to a fixed period of time. By using metaplan and mind mapping, it is possible to visualise the ideas generated and to sort them, for example, on a pinboard. They can then be allocated and assessed in the context of different issues.

Working groups, moderation, *Planungszellen* (planning cells) and *Zukunftswerkstätten* (future workshops) are used for the management of planning processes in which more detailed concepts are fleshed out in an atmosphere of collaboration and participation. Based on a process which produces several ideas, by using for instance the methods of brainstorming and metaplan mentioned above, conceptions are worked out in individual groups. If it is necessary for the process to be guided, it is possible to involve professionals in chairing these working groups. These collaborative and creative methods are habitually used in the process of setting up informal plans.

## **Informal plans in Stuttgart**

In Stuttgart and the Stuttgart region some informal plans already exist that deal with urban river revitalisation projects, or that have been established especially for urban river revitalisation projects. These plans are outlined in the following.

### ***Urban Development Strategy Stuttgart***

Urban Development Strategy is a long-term concept for analysis, information, coordination and control of municipal planning concerns. It ties together the economic, environmental and social concerns of a city with the requirements of urban development for the entire municipality. There is no fixed administrative territory and no formal planning procedure regulated by law. The Urban Development Strategy, prepared by the office of City Planning and Urban Redevelopment, is mainly in written form, the scale of maps is from 1:2500 to 1:20000.

An interdepartmental strategy for city development in Stuttgart was introduced in 2004. It provides a basis for the Urban Development Strategy (a comprehensive urban development plan) in the fields of housing, economy and employment, culture and education, recreation and sports, social affairs, landscape, open spaces, mobility and traffic. This overall city-wide planning assessment tool – which also places emphasis on selected project models – is intended to serve as a “navigation aid” for spatial planning, as it provides a broad framework for various fields of action.

### ***Blue Plan Stuttgart***

Blue Plan Stuttgart is a master plan which outlines revitalisation projects along the Neckar River. The plan was established in 1980 and reflects a wide variety of ideas for revitalising the areas alongside the river and the creeks that pass through the city. The intention is to update the Plan continually. Some of the Master Plan’s objectives are the ‘protection and development of recreation areas’, ‘improvement of cycle paths

and footpaths' and 'near-natural riparian strips'. The realisation of projects depends on the availability of space and money.

Twelve projects have been implemented to date. One of the first projects was the Feuerbach Stream near Stuttgart, which was implemented in 1990. Prior to implementation, the stream was encased in a conduit and completely regulated. The existence of an abandoned sports ground offered an opportunity for restoring natural riversides, developing retention areas for flood protection and creating cycle paths and footpaths. The project thus allies ecological aspects with human health considerations as well as recreation and urban town planning.

### ***IKoNE Stuttgart***

IKoNE or *Integrierende Konzeption Neckar-Einzugsgebiet* (the Integrated Concept for the Neckar River Basin) was established in 1998 by the State of Baden-Württemberg. The main objective of this concept is to support sustainable development for the Neckar river basin by creating and coordinating a variety of water management measures. The scheme integrates and coordinates existing local and regional plans as well as projects that have been implemented already and those which are to be implemented in future. The Blue Plan Stuttgart was, for example, one of the concepts which were taken into consideration. It is intended that measures to improve flood protection, the ecological structure or the pollution load of waters will be implemented with the participation of the parties involved.

### ***MORO Neckar Green Belt Stuttgart***

The Neckar Green Belt concept is part of the German research programme *Modellvorhaben der Raumordnung* (MORO) (Model Projects in Spatial Planning) which is financed by the Federal Institute for Research on Building, Urban Affairs and Spatial Development. The project was developed by a private company between 2004 and 2009. The main focus is on the river Neckar as a federal waterway in the Plochingen to Marbach section, in which the city of Stuttgart is located. The main idea for this concept was to take plans that were set up for different projects and combine them to make one overarching project. Discussions took place in several working groups made up of local and regional decision-makers, in order to consider the possibility of implementing plans for about 60 projects focusing on revitalisation, recreation and transport links. As a result of these working groups, twelve projects have been proposed and nine projects are on the way to implementation.

### ***Master Plan Landscape Park Neckar Valley Stuttgart***

The Master Plan Landscape Park Neckar Valley was established between 2006 and 2008 by the Verband Region Stuttgart (administration at regional level). Apart from the protection of landscape and environment, the main idea of this master plan is to design and increase the value of the landscape in a region which is characterised by an infrastructure of housing, economy and transport. The master plan therefore contains, in the form of text and graphics, an analysis of the situation, general principles and aims as well as different measures in the spheres of landscape, housing and traffic as well as recreation and tourism. One of the main objectives in drawing up this kind of informal plan was to involve different institutions, municipalities, associations and other interested parties in order to encourage identification with and commitment to the detailed project.



---

## **Informal plans in Leipzig**

In Leipzig and the Leipzig region some informal plans also exist that deal with the revitalisation of urban river spaces. The list that follows here does not claim to be complete.

### ***Integrated Concept for Watercourses Leipzig***

Leipzig's *Integriertes Gewässerkonzept* (Integrated Concept for Watercourses) is a flood protection concept for Leipzig's water network and part of the State of Saxony's Weiße Elster Flood protection concept. It was approved by the city council in 2004. In the medium and long term, this concept aims at minimising the danger of flooding by integrating different aspects such as flood protection, urban development, water tourism, and water quality improvement. Its focus is not only on flood protection, but also on frequently occurring periods of low water. Its measures consist of, among others, reopening the Old Elster and the mill streams Elstermühlgraben and Pleißemühlgraben, connecting the White Elster and the New Luppe and desludging the mill stream Elstermühlgraben and the flood bed of the Elster. The Integrated Concept for Watercourses has been one factor that has led to the Water Tourism Concept for the Region of Leipzig.

### ***Water Tourism Concept for the Region of Leipzig***

The *Wassertouristisches Nutzungskonzept Region Leipzig* (Water Tourism Concept for the Region of Leipzig) was developed from 2005 to 2007 by the Green Belt Leipzig, which is a cooperation of the City of Leipzig, twelve surrounding municipalities and two districts working together voluntarily with citizens, companies and NGOs. This concept aims at merging and harmonising all of the more than 100 activities and individual local measures that are progressively necessary for the implementation of a system of lakes interconnected by Leipzig's watercourses under consideration of the objectives of the European Water Framework Directive and the Natura 2000 network. This system located between Leipzig and the new lakes of the post-mining landscape north and south of Leipzig will consist of eight watercourses with a total length of more than 200 kilometres.

As the Water Tourism Concept for the Region of Leipzig is an informal plan, there are no legal approval procedures required for this concept. However, approval procedures are necessary for the individual local measures. Therefore, if different restrictions, such as the objectives of the European Water Framework Directive and the Natura 2000 network, are already considered when a concept is being drafted, this will reduce the scope of evaluation needed for the individual local measures.

### ***Integrated Urban Development Concept Leipzig 2020***

The City of Leipzig, in cooperation with external stakeholders and the public, began developing a citywide integrated strategy in 2007. The scheme was approved by the city council in 2009. It is based on different sectoral concepts and on integrated strategies at the district level. The concept comprises aims and focal points of activity until 2020 and beyond. It serves as a guideline for the future development of the city and facilitates applications for funding.

The Integrated Urban Development Concept refers to the development of the tourism potential of the system of interconnected lakes mentioned above as one of its aims in the sector of economic and labour market activities. The same aim is named in the sector of green spaces and the environment, together with flood protection and revitalisation of watercourses in the floodplain forest and in the built-up sections of the city. A map marks all districts that are relevant for flood protection and/or water tourism.

---

### ***Master Plans City Harbour Leipzig and Lindenau Harbour***

Both master plans concretise the long-term development of the respective harbour area and can serve as the basis for sectoral planning. They define the functional specifications of the harbours and integrate the planned investments in their urban neighbourhood. Both harbours are important components of the above-named water tourism concept. While development of the City Harbour, which is located 400 metres from the city centre, has required the opening of the mill stream Elstermühlgraben in this area, the Lindenau Harbour in Western Leipzig needs to be connected with the Karl Heine Canal.

The Master Plan City Harbour Leipzig was drafted on behalf of the City of Leipzig and published in 2010. It plans four implementation steps: the outer mole, public areas, private areas in the immediate vicinity, and middle- and long-term extensions. The harbour area mainly consists of landing stages, open spaces and service facilities. Domestic buildings and/or commerce could be part of the extension areas.

The Master Plan Lindenau Harbour was published in 2009. It is based on an urban-planning procedure for calling in expert opinion set up by the association Wasser-Stadt-Leipzig e.V. in cooperation with the City of Leipzig. The master plan envisions high quality domestic buildings as well as water tourism facilities and recreational areas on the eastern side and renaturation and landscaping on the western side of the harbour.

### **State of the art**

As demonstrated by the development of informal plans for the City of Stuttgart and the City of Leipzig, informal plans are an effective planning tool for the preparation of and contribution to revitalisation projects. The opportunity to create plans with a more open text and graphic design allows a more effective presentation of ideas to target groups. Moreover, the absence of strict requirements or regulations with regard to the design of graphics facilitates the acceptance of project objectives and can therefore accelerate the implementation of revitalisation projects.

The collaborative process and the involvement of interested parties in the planning and licensing process can speed up the implementation of projects. What is more, this process ensures better acceptance of responsibility and ownership so that additional opportunities for financing through voluntary work, donations, foundations and sponsorships are opened up.

The involvement of interested parties or stakeholders helps to create new ideas and solutions and raises river-awareness among the population. The collaborative and coordinated planning process allows the reconciliation of conflicts between the demands of industry and residential areas and the requirements of flood protection, recreation and ecological aspects of riverfronts.

On the other hand, the organisation of the collaborative process requires special efforts. Apart from the strengths of an intensive participation process, it can be difficult to achieve the amount and level of commitment required. Also negotiating solutions or achieving consensus among all stakeholders and participants can become more difficult.

One of the main drawbacks inherent in informal plans is that informal plans are not mandatory. It can therefore be difficult to successfully implement the projects if there is not enough land available, if there is a lack of support from the competent authorities or if there is inadequate funding, for example.

---

## The significance of competitions

### Types of competitions and processes involved

In order to find innovative solutions for urban planning, constructional and artistic problems, competitions are a viable option. According to the German guidelines for planning competitions (cf. BMVBS, 2008) published by the Federal Ministry of Transport, Building and Urban Development, competitions are based on the following principles:

- equal treatment of participants in competitions as well as in the application process,
- clear and well-specified assignment,
- adequate cost-performance ratio,
- qualified jury members,
- anonymity of contributions during the competition, and
- award of contract (ibid: 4).

Apart from these general principles, competitions offer participants a reward provided by the developer, who becomes the recipient of a plan or concept selected by a panel of jurors on the basis of comparative assessment. In this manner competitions achieve the objective of inspiring innovative ideas and optimised concepts.

The guidelines for planning competitions are the essential basis of regulations in Germany. They regulate, for example, who participates in a competition process, which must involve a developer, competitors and a panel of jurors. In addition, the developer can consult further participants for support or advice (ibid: 5).

In principle, the process starts with a detailed description of the assignment, the competition conditions and the requirements for the public invitation to tender. Next, the competitors have to submit their work anonymously. The panel has to assess their work by applying a variety of criteria, create a short list, and then award prizes to the best plans submitted. One of the prize-winners is to be awarded the contract for implementing the plan submitted.

Furthermore, the guidelines differentiate between different kinds of competitions. Open competitions are based on a public invitation to tender, which is accessible for interested professionals. In contrast to the open competition, during a non-open competition competitors are selected by different criteria after the public invitation process is completed. For competitions that involve a combination of the procedures described, the guidelines specify the application of procedures for a collaborative competition. This kind of competition is to be conducted if the developer is unable to specify the assignment in detail. In this case, the assignment and objectives can be defined in greater detail in an ongoing process in which the competitors exchange views (ibid: 5f.).

### Analysis of strengths and weaknesses

In contrast with the planning process in general, a crucial advantage of competitions is the opportunity they offer for developing innovative ideas and concepts for a specific project. In the absence of formal regulations or requirements, the developer is able to make optimal use of existing creative potential, thus giving a contractor the choice among several options.

The appointment of a wide range of participants and professionals to the jury is intended to ensure that the plans or concepts submitted are of a high quality. This applies especially in the case of collaborative competitions. In this case, the different stages of discussions and presentations ensure the high quality of entries.

On the other hand, the complexity of the process makes great demands in terms of time, costs and staff. The preparation of documents for the competition (detailed description of the assignment, the competition conditions and requirements) is a very elaborate process for the developer. Apart from the efforts involved in preparation, realisation and revision, the award of several prizes is very costly for the developer. But the competitors who prepare plans or concepts must also be willing to make considerable investments in terms of material, time and staff. If their proposal is not awarded a prize, the effort made by these competitors, i.e. the private companies concerned, will remain unrewarded.

Owing to the fact that several competitors will take part in a competition, the development of many ideas and concepts may be only a vague reflection of the actual project, and this is another drawback inherent in competitions. Therefore competitions run a certain amount of risk that they will deviate too far from the original objectives of the project.

In addition the jury members usually work under time pressure. As a result, they often pay more attention to the layout of designs than to their content.

Another drawback of competitions is that some designs may prove impractical (if, for example, there is not sufficient space available to enable their implementation). This can lead to difficulties, especially when the award has already been published. In this case, the developer will have to justify why the prize-winning design cannot be implemented and one of the other designs is implemented instead.

## **The process of weighing and balancing various demands**

In preparing decisions in all fields of spatial planning, interests typically need to be weighed, which is a key requirement in planning for the benefit of society under the rule of law (cf. Pahl-Weber, Henckel, 2008: 271). In the process of weighing the different public and private interests to be considered, it is essential to decide which interests have priority. The decisions taken as well as their underlying objectives have to be well-founded. The main principles underlying the weighing of different interests are to ensure that:

- interests are duly weighed,
- all matters warranting consideration are covered,
- the importance of public and private interests is appreciated, and
- the balance achieved is proportionate to the objective importance of individual interests (ibid.).

The process of weighing is characterised by a series of steps. The first step is to ascertain all the interests concerned. Next, each interest must be assessed separately. The process of weighing interests against each other cannot be implemented until this has been done (cf. Fürst, Scholles, 2001: 155). The weighing process is based on a variety of objectives. Apart from the objectives laid down in the plan itself, due attention must be paid to objectives established by law. The process is therefore characterised by a variety of basic requirements for specific interests such as the legal basis, the system of assessment and the value system. An interest is of major importance in the weighing process if, for example, it is quantifiable or if it is of legal significance (ibid.).

One of the main concerns in the weighing of interests is urban land use planning. In this field, the requirement of weighing interests is regulated by the Federal Building Code. A list of various interests is laid down in the Federal Building Code, indicating those interests which have to be given special consideration.

Apart from weighing interests for decision-making in spatial planning, it is also important to weigh interests in the planning process for sectoral planning. In these plans, conflicts can arise between different interests that are relevant to a single public policy. Objectives regarding the interests of flood protection can, for example, be in conflict with the interests of restoring or maintaining the ecological diversity of a river. In this case, too, it will be necessary to weigh conflicting interests in order to reach a decision.

Weighing diverse interests is a practice employed not only with respect to planning but also in the context of political decisions. In this case, professional aspects, criteria, values or aims are frequently ignored and decisions reached based mainly on political objectives and intentions. Nevertheless the basic principles underlying the weighing of different interests are to be taken into account in the political decision-making process, as well.

## **Environmental planning instruments**

### **State of the art**

The main instruments of environmental policy available for implementing revitalisation projects are the Environmental Impact Assessment (EIA), the Impact Mitigation Regulation (IMR), the Appropriate Assessment of Natura 2000 Sites (AAN) and the Assessment of Special Protected Species (APS). A description and comparison of these planning tools is contained in Table 1.1-8.

Table 1.1-8: Characterisation of environmental policy instruments (© City of Stuttgart, based on Bosch &amp; Partner, 2010).

	<b>EIA</b>	<b>IMR</b>	<b>AAN</b>	<b>APS</b>
<b>Legal foundation</b>	<ul style="list-style-type: none"> <li>EIA Directive</li> <li>Environmental Impact Assessment Act</li> </ul>	<ul style="list-style-type: none"> <li>Federal/State Nature Conservation Act</li> <li>Federal Building Code</li> </ul>	<ul style="list-style-type: none"> <li>Habitats Directive</li> <li>Birds Directive</li> <li>Federal/State Nature Conservation Act</li> </ul>	<ul style="list-style-type: none"> <li>Habitats Directive</li> <li>Birds Directive</li> <li>Federal/State Nature Conservation Act</li> </ul>
<b>Objectives</b>	<ul style="list-style-type: none"> <li>Identification and assessment of environmental impacts from projects prior to authorisation</li> <li>Results of EIA must be taken into account in the authorisation process</li> </ul>	<ul style="list-style-type: none"> <li>Maintaining the status quo of nature and landscape</li> <li>Implementation of mitigation and compensatory measures</li> </ul>	<ul style="list-style-type: none"> <li>Protection of a coherent European ecological network (Natura 2000 sites)</li> <li>Protection of defined habitat types (Annex I HD) and protected species (Annex II HD, Annex I Birds Directive) in Special Areas of Conservation</li> </ul>	<ul style="list-style-type: none"> <li>Protection of defined species (Annex IV HD, all European bird species), individuals and populations</li> </ul>
<b>Subjects of protection</b>	<ul style="list-style-type: none"> <li>Human population (health)</li> <li>Fauna, flora, biodiversity</li> <li>Soil, water, climate, air</li> <li>Landscape</li> <li>Cultural heritage, Environmental application</li> </ul>	<ul style="list-style-type: none"> <li>Efficiency and functioning of the ecosystem</li> <li>Visual quality of the landscape</li> </ul>	<ul style="list-style-type: none"> <li>Defined habitats (Annex I HD) and species (Annex II HD, Annex I BD) in Special Areas of Conservation</li> </ul>	<ul style="list-style-type: none"> <li>Defined species with their habitats (Annex IV HD, European bird species)</li> </ul>
<b>Activities concerning the instruments</b>	<ul style="list-style-type: none"> <li>Specific projects listed in Annex I and II of the EIA Directive</li> </ul>	<ul style="list-style-type: none"> <li>Encroachments are defined as changes in the form or use of areas or changes in the water table contiguous to the living soil which can considerably impair the efficiency and functioning of the ecosystem or the visual quality of the landscape</li> </ul>	<ul style="list-style-type: none"> <li>Plans or projects not directly connected with or necessary for the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects</li> </ul>	<ul style="list-style-type: none"> <li>Activities that cause a deterioration or destruction of breeding sites or resting places, a disturbance of species during the period of breeding, rearing, hibernation and migration or forms of capture or killing of species</li> </ul>
<b>Legal consequences</b>	<ul style="list-style-type: none"> <li>Significant adverse effects on the environment are taken into account in all decisions by the authorities</li> </ul>	<ul style="list-style-type: none"> <li>Instigator of encroachment has to desist from unnecessary damage or to take mitigation and compensation measures</li> <li>Encroachment is to be prohibited, if impacts cannot be avoided or sufficiently compensated for, and interests of nature and landscape conservation take priority for the purpose of weighing interests</li> <li>No weighing priority: imposition of impact mitigation</li> </ul>	<ul style="list-style-type: none"> <li>Plans or projects likely to cause significant impacts will not be allowed</li> <li>Derogation: no alternative solutions, overriding public interests, compensatory measures</li> <li>Opinion of the EU COM is required in cases where impacts are likely on priority habitats or species</li> </ul>	<ul style="list-style-type: none"> <li>Appointed activities are to be prohibited</li> <li>Derogation: no satisfactory alternative, overriding public interests, derogation is not detrimental to maintaining the favourable conservation status of the population of the species concerned</li> </ul>



---

## Analysis of strengths and weaknesses

One of the strong points of using environmental planning tools in revitalisation projects is their suitability for systematic examination of the state of the environment (state of nature and landscape). Furthermore, they facilitate assessing and describing any relevant environmental impacts of a project and defining measures for preventing, reducing or compensating for such impacts.

If the Impact Mitigation Regulation is applied in the context of an encroachment in a municipality, in some cases impact mitigation fees can be charged. This fee can help to finance the implementation of revitalisation projects. In addition, revitalisation projects which have already been implemented can gain eco-points for entry into the so-called Eco Account or can be added into a pool of compensatory measures. If it becomes necessary to apply the Impact Mitigation Regulation to a different project or encroachment in the municipality, these eco-points or compensatory measures can be claimed in order to re-finance a revitalisation project.

On the other hand, the application of environmental planning tools involves dealing with a complex regulatory framework and a wide range of techniques. In the case of revitalisation projects, the focus of environmental tools is mainly on aspects of nature conservation, environment and landscape management. Socio-economic aspects or 'soft site-related factors' such as recreation or experiencing nature are therefore ignored, despite the important role they play in the process of planning revitalisation projects.

Another weakness of environmental tools is the strict and clearly defined field of application defined in the relevant laws (see Table 1.1-8, 'activities concerning the instruments'). A detailed documentation on each of the instruments is required even if the project is characterised by positive environmental impacts; this causes additional demands on time and costs during project planning.

## Procedures, planning processes and documents required to obtain a licence

The main licensing procedure for projects in the context of sectoral planning in Germany is the planning approval procedure, which is regulated in general by the Administrative Procedures Act. Special requirements for planning approval of revitalisation projects are specified in the Federal Water Management Act.

Planning approval procedures are designed to determine whether a particular development project with spatial impacts should be authorised or not. These procedures involve weighing and balancing both the interests of the developer and any public or private interests that might be affected by the development project. The process culminates in a legally binding decision (cf. Pahl-Weber, Henckel, 2008: 89). The planning approval incorporates all other decisions required from public authorities. All permissions are subject to the final planning approval decision. Moreover, there is a strong involvement of public authorities and the general public. In some cases a planning permission can replace planning approval. This is the case when the rights of third parties are not adversely affected or when the affected parties have given their written consent to the use of their property or the exercise of another right and agreement has been reached with public agencies whose areas of responsibility are affected (ibid.). In contrast to the planning approval, these procedures do not require the participation of the general public and permissions according to sectoral planning are not included.

In the case of measures to extend existing water bodies, both the Federal Water Management Act and the State Water Management Act require a planning approval. The approval can be replaced by planning permission if there is no obligation to carry out an EIA. For measures to extend existing water bodies, an EIA has to be carried out if the general or site-specific screening indicates the likelihood of significant impacts. The State Water Management Act of Baden-Württemberg specifies, for example, that there is no licensing at all required for projects on small water bodies if the project produces a near-natural water body.

As far as water body extension projects are concerned, it is, as a rule, also necessary to apply the Impact Mitigation Regulation in addition to EIA and other environmental tools. The permission process regarding these environmental planning tools or their outcomes is integrated into the process of applying for approval or planning permission. Therefore, the individual reports and plans regarding environmental planning tools (such as plans for compensatory measures or the condition of the environment) have to be submitted in addition to technical descriptions and plans referring to the measures to extend existing water bodies, in order to obtain the planning approval or planning permission.

The process as well as the documents that must be prepared to obtain a licence for projects is, in general, very complex, highly-regulated and time-consuming. This applies especially to projects on a larger scale. Apart from that, the integration of all other decisions/permissions required from public authorities in the planning approval or planning permission is a crucial advantage, because only one permission and, above all, only one procedure is necessary.

An intensive process of participation involving relevant parties, stakeholders as well as the general public facilitates the consideration of important information at an early stage. In addition addressing inquiries to relevant authorities as a part of the procedure provides important information and statements that can be very helpful in the planning process for revitalisation projects.

## Detailed planning and working planning

Detailed planning in the context of the implementation of revitalisation projects can be divided into different working stages. The planning process starts with the conceptual design, including cost-benefit analysis, feasibility studies on financial assistance from authorities and the arrangement of various data and information such as hydrological or hydraulic information.

Next, the first draft of the implementation plan has to be drawn up. This plan has to define the concept and identify documents required for planning permission or planning approval, including the availability of land transactions or land acquisition.

Once the planning approval or planning permission procedure is completed, the final plan for implementation must be prepared. This plan specifies the project in detail and outlines the process of implementation as well as presenting detailed drawings for specific constructions. Furthermore the plan has to be adapted to the conditions determined in the planning permission or planning approval. Detailed plans with more detailed drawings and specific constructions for different parts of the project can make the project more concrete.

The subsequent execution of construction works calls for monitoring throughout the implementation phase, focusing on water management, environmental aims and the specific conditions determined in the planning permission or planning approval, for example.

Apart from the strengths and weaknesses of the licensing procedures already mentioned above, the main obstacle to be overcome during implementation is the lack of available land and related procedures for land transactions, land acquisition or lease of land. A feasible solution to this problem in the context of revitalisation projects in urban spaces and the requirements of urban planning is the instrument of land reallocation. Land reallocation is regulated in the Federal Building Code and aims to create plots suitable for building or other uses in terms of location, shape and size. Reallocation is a land-swap procedure that can be applied within an area covered by a binding land use plan or in a built-up area. The main objective of this procedure is to reorganise or open up specific areas of both developed and undeveloped land. The properties affected are therefore first pooled. Then vehicular and pedestrian areas as well as green spaces are deducted, and the remaining area is redivided among property owners (Pahl-Weber, Henckel, 2008: 205). Apart from this instrument, which can be applied in urban spaces, a similar instrument exists for realigning agricultural land and is regulated in the Land Consolidation Act.

### 1.1.3.4 Planning methods – analysis and review

As planning methods are strongly determined by national laws and national planning systems as well as by the experience of planners in the different countries involved in REURIS, it is difficult to summarise the results of analysis and evaluation of planning methods in terms of valid transnational conclusions. Too many different aspects determine analysis and evaluation on national level. Thus, the following analysis is limited to the most obvious aspects.

**Informal plans** seem to be an appropriate tool for facilitating the implementation of urban river revitalisation projects, especially in Germany. Although there is a kind of state of the art with predefined working stages, work on informal plans does not have to follow special rules and regulations and is not subject to any legal or administrative regulations and requirements, but is instead characterised by non-binding and non-formalised procedures. In the course of pursuing urban river revitalisation in Stuttgart and Leipzig, different informal plans have been generated at different levels of spatial planning. Informal plans may push political decisions related to revitalisation projects and their implementation within spatial land use planning. But they have to be “translated” into formal plans (preparatory land use plan, binding land use plan, plans for planning permission, planning approval and building license). In Poland and the Czech Republic informal plans are not used to the same extent as in Germany. Although there is a high level of knowledge of analytical, qualitative, quantitative, taxonomic and integrated methods in these two countries, this knowledge is put to use mainly in the context of local revitalisation programmes and municipality restoration plans (Poland) or in the context of feasibility studies for projects that will be financed by European Union structural funds (Czech Republic).

**Competitions** are a useful tool for obtaining innovative ideas and the best solution for a project of any scale. Developers can make optimal use of existing creative potential and secure a choice among several options for the contractor. Numerous specific regulations determine how the different kinds of competitions are to be handled by the contractor. These regulations and the kind of competitions carried out in Poland, the Czech Republic and Germany are comparable and, indeed, nearly identical. Although competitions are common tools in architecture and town planning, they are still rare in landscape architecture or land use management and particularly in revitalisation projects. The results of competitions, like the results of informal plans, must be “translated” into formal plans. Either the results must be implemented in preparatory land use plans or land use management plans, or they must be incorporated into a binding land use plan. Additionally, all documents must be prepared that are required for obtaining the licenses needed for realisation of the project.

**Weighing and balancing the various demands** is the most important process in sectoral planning and especially in spatial planning. There is no binding rule that governs how conflicting demands can be harmonised. But the state of the art is to ensure that all interests concerned are determined. Additionally, each interest must be assessed separately. Among the interests to be considered in arriving at an appropriate decision are professional aspects, legal requirements and the value systems of the parties involved. Due to the demands of industry, town development, infrastructure, farming and flood protection, the interests of river revitalisation have not been taken into account adequately in Poland, the Czech Republic and Germany. It would seem that this tendency will not change until industrialisation comes to an end. As the service sector becomes increasingly important, interest in revitalisation projects is also on the rise. This process began in the 1980s in Germany and at the end of the twentieth century in Poland and the Czech Republic. Nevertheless, numerous examples show that the interests of revitalisation projects are not considered adequately.

**Environmental planning instruments** used in Poland, the Czech Republic and Germany result partly from directives enacted by the European Commission. Therefore, procedures for environmental impact assessment, strategic environmental impact assessment, the assessment of Natura 2000 sites and the assessment of special protected species are almost the same in Poland, the Czech Republic and Germany. In Germany impact mitigation regulation was established as an instrument before the introduction of the environmental impact assessment. This instrument is much more precise than environmental impact

assessment and calls for specific quantitative calculations. In special cases, urban river revitalisation projects require an environmental impact assessment. But most urban river revitalisation projects will enhance the status of natural resources. Thus urban river revitalisation projects may serve as compensatory measures for adverse environmental impacts caused by other projects.

The procedures, planning processes and preparation of documents required to obtain a license as well as detailed planning and working planning must be prepared in compliance with the requirements of national laws and regulations.

---

## 1.2 Best practices

To learn more about the state of the art of urban river revitalisation planning and implementation and experience in this field, each project partner compiled examples of best practices for urban river revitalisation in their country.

The studies were aimed at:

- analysing and evaluating the state of the art applied in the partners' countries as a basis for further development of planning and implementation methods,
- learning from the projects analysed, and
- transferring knowledge between the partners.

The studies mainly analysed:

- goals pursued with urban river revitalisation projects,
- planning and implementation processes,
- financial issues,
- public and stakeholders involvement,
- the most difficult obstacles, and
- key factors for success.

The partners agreed on these points with respect to the general content and aim of the study, but in view of the different situations in Poland, the Czech Republic, and Germany, it was decided that each partner would develop and follow his own methodology.

In Germany river revitalisation is widespread. Among experts, best practice examples are well-known. Thus, it was not difficult to find suitable examples for the revitalisation planning and implementation process. Selection and evaluation was based on qualitative assessment. Therefore, Stuttgart and Leipzig confined their analysis to the federal states of Baden-Württemberg, Bavaria, and Saxony.

The situation in Poland and the Czech Republic is different from the situation in Germany. River revitalisation has only begun fairly recently, and often technical solutions are still preferred. Thus, the partners from Poland and the Czech Republic chose a more statistical approach that examined cases from all over the respective countries in order to find suitable projects. Best practice examples were identified step-by-step in the course of several evaluation and selection stages.

## 1.2.1 Best practices in Poland, the Czech Republic and Germany

### 1.2.1.1 Best practices in Poland

#### Rivers and streams in Poland

Most Polish cities suffer from the consequences of flawed decisions and from planning that disrupted the linkages between urban spatial structure and rivers. The inevitable result of urban and industrial expansion along waterways was a disastrous reduction of natural and recreational functions of the river valleys. As a consequence, cities turned away from their riversides. In the case of small rivers in large cities, such as in the Upper Silesia agglomeration, a major factor in transforming the river basins was spontaneous urbanisation. Because of the requirements of flood protection, most small urban streams were regulated, channelled and adapted to discharge excess water and sewage. The regulation and channelisation of river beds, the construction of drainage works and the implementation of active flood protection contributed to further degradation of the river valleys.

In the mid-twentieth century, industrial utilisation of the inner-city began to decline, leaving behind abandoned riparian post-industrial areas. This resulted not only in a decrease of the visual and functional attractiveness of rivers but also led to a decreased perceptibility of watercourses, a lack of accessibility for all residents, and sometimes also a disruption of ecological permeability.

Several large cities have preserved valuable green areas by riversides as a result of planned protection (conservation) of urban green structures. Despite their ecological value, the potential of these areas is not fully exploited, e.g. for recreation, due to the poor availability of riverside land. Recent years have seen the restoration of the significance of rivers in towns. Although many Polish rivers are still in poor condition, there are several good examples of urban regeneration and revitalisation of urban river spaces.



*Gdansk: Motława River waterfront with granary buildings after revitalisation (© A. Januchta-Szostak)*



*Bydgoszcz: Brda River downtown stretch (© A. Januchta-Szostak)*

### Approach

The methodology and criteria for the selection of best practice examples implemented by all Polish partners were elaborated by Dr inż. arch. Anna Januchta-Szostak, who advised the Bydgoszcz team as an external expert. The selection was conducted in four stages according to the plan in Figure 1.2-1.



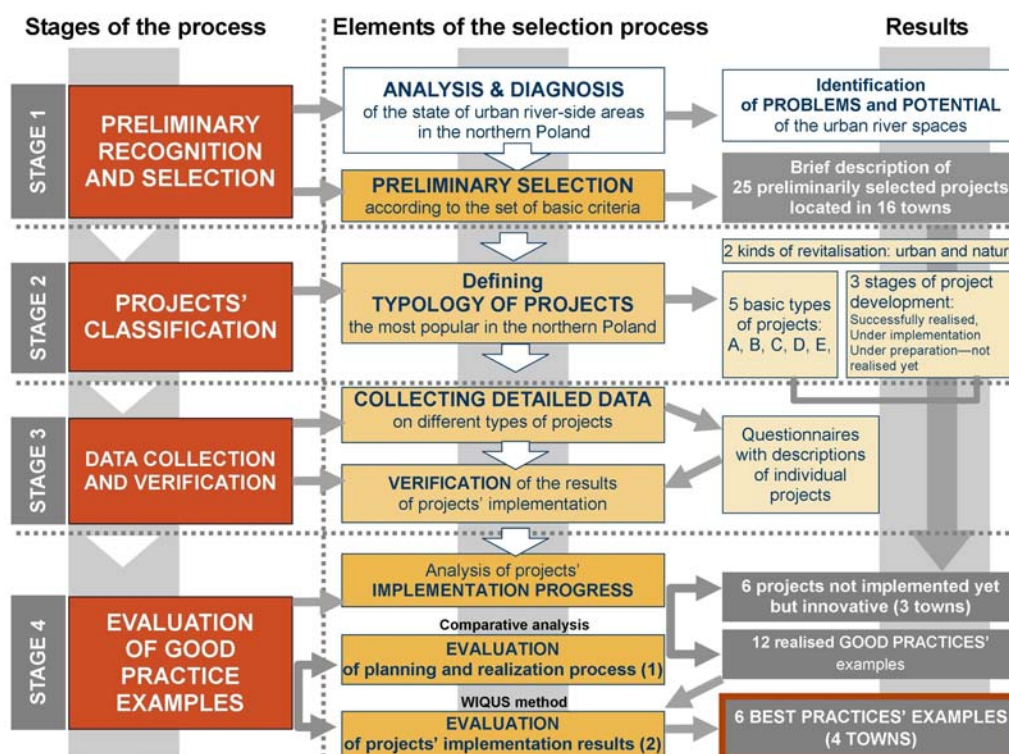


Figure 1.2-1: Scheme of the best practices' selection (© A. Januchta-Szostak).

The main sources of information were literature related to the subject of the research, local revitalisation programmes as well as expert interviews and local site visiting. For the needs of the REURIS project, special questionnaires were prepared to collect comparable data on the process and results of urban riverside spaces revitalisation in various cities.

In order to obtain information, the following activities were carried out:

- review of literature, of available Internet data, of projects connected with the subject of the research (co-financed by the EU) and of existing and available manuals of “good practices” connected with the subject of the study,
- analysis of the authors' data bases (for northern Poland: the REURIS project team's external expert; for southern Poland: Central Mining Institute team),
- direct and telephone interviews with experts: representatives of relevant departments of the municipal authorities, provincial authorities, NGOs, including those related to environmental protection and representatives of the Association Regeneration Forum,
- analysis of the questionnaires developed for the REURIS project and sent to municipal and provincial offices as well as planners and designers, and
- local site visiting: checking the results of implementation and collecting photographic documentation and interviews with residents and users of the riverside areas.

The area of research included the riverside towns and cities in Poland, where in the past twenty years projects that could be described as river spaces revitalisation projects or actions aiming at such transformation have been undertaken. Due to the large number of such towns and cities, in northern Poland the territory was limited to forty-three cities and in southern Poland to twenty-one projects. After analysing the available reference materials and local field visits in order to verify the results of the projects, twenty-five projects from northern Poland and eleven from southern Poland were selected. The main evaluation criteria for the pre-selection are illustrated in Table 1.2-1.

Table 1.2-1: The main evaluation criteria for the pre-selection needs of the projects (© A. Januchta-Szostak).

Criteria for evaluation of the planning and implementation process	Criteria for evaluation of the results of implementation
<ul style="list-style-type: none"> <li>• Complexity of the project: application of complex and innovative solutions as well as integrated planning methods</li> <li>• Sustainability: integration of environmental, spatial, social and economic issues as well as stimulating innovations</li> <li>• Public involvement</li> <li>• Efficiency of use of capital and non-capital sources</li> </ul>	<ul style="list-style-type: none"> <li>• Effectiveness: whether and how well practices affect the development of the city and the quality of water bodies</li> <li>• Usefulness: whether and how the implemented practices integrate such aspects as environmental protection, social development, spatial coherency, sustainable economy</li> </ul>

The selected projects were classified into five categories (stage 2):

- trans-regional initiation of tourism activities along river valleys and waterways,
- strategies for river valley revitalisation within cities,
- urban revitalisation of riverside districts,
- riverside boulevards and waterfront rehabilitation, and
- regeneration and renaturalisation of small water bodies.

Classification was carried out so the most common types of projects could be compared.

Evaluation and verification of data (stage 3) made it possible to define progress in implementing the projects: realised projects, projects under implementation, or projects that had not been implemented but were at least innovative (see chapter 1.6, Table 1.6-1).

The method for the detailed evaluation of the results of the selected projects (stage 4) was based on Ms Januchta-Szostak's own methodology WIQUS (Water Impact on the Quality of Urban Spaces). This method comprises four groups of factors: spatial (visual), social, economic, and eco-hydrological. Due to the wide variety of projects, the lack of a sufficient number of examples in each of the separate types, and difficulties in accessing specific data, the application of statistical methods was limited to the analysis of comparative assessment.

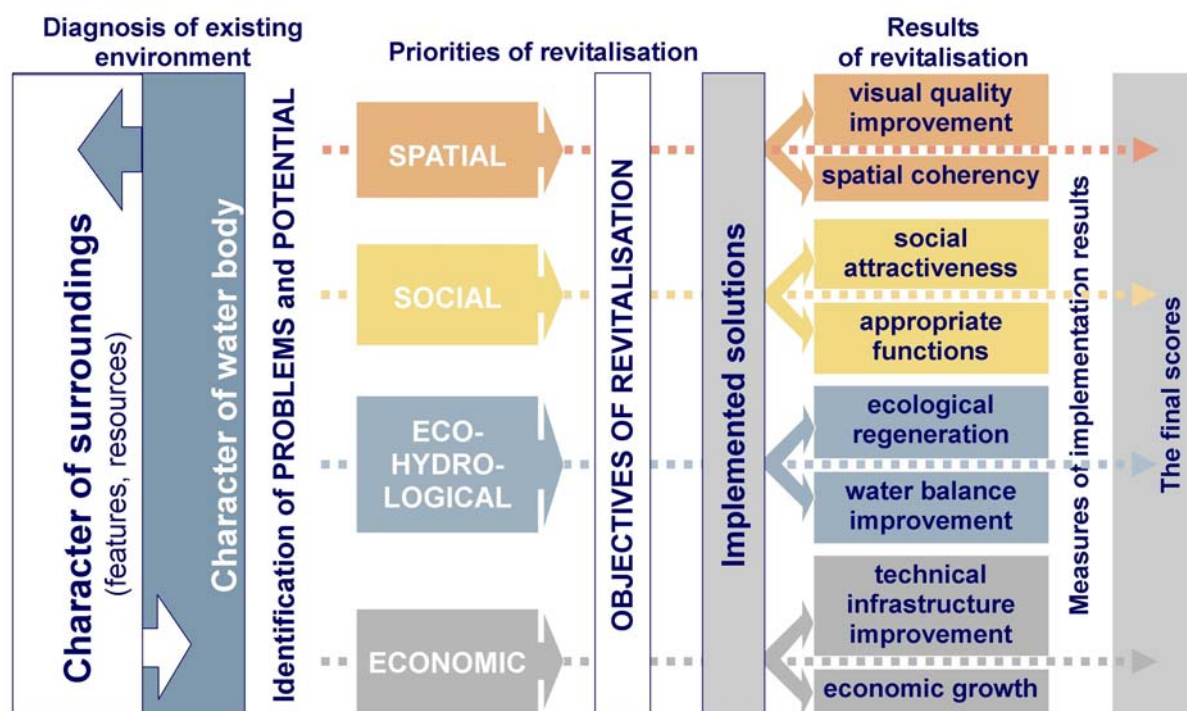


Figure 1.2-2: WIQUS methodology application in the evaluation of the revitalisation projects' results (© A Januchta-Szostak).

Key aspects influencing the quality of the natural environment and urban space were taken into consideration. These included social attractiveness, appropriate functions, visual quality improvement and spatial coherency, ecological regeneration, water balance improvement, technical infrastructure improvement, and economic growth. These aspects were divided into sub-criteria, which were evaluated by allocating scores (see chapter 1.6, Tables 1.6-3 and 1.6-4).

## Overview of the projects

Table 1.2-2 shows the analysed projects. Eight projects are described in detail in the following chapter. They are marked by a grey background. Results of the evaluation of the planning and realisation process are summarised in chapter 1.6, Table 1.6-1.

Table 1.2-2: *Analysed projects* (© CMI Katowice, City of Katowice, City of Bydgoszcz).

No.	Name	Location (city, river)	Executing organisation	Status, year of completion	Main goal(s)
<b>Northern Poland</b>					
<b>A. Trans-regional initiation of tourist activities along river valleys and waterways</b>					
1A	Parsęta River Basin floodplains integrated management system (pilot project: swamp reconstruction „Pyszka”)	Municipalities of Kołobrzeg, Białogard, Dygowo, Grzmiąca, Karlino: Parsęta River Basin	Union of Towns and Municipalities of the Parsęta River Basin	realised	ecological economic
2A	Tourist development of natural amenity regions in Parsęta River Basin	Municipalities of Białogard, Dygowo, Grzmiąca and Karlino: Parsęta and Radwia River basins	Union of Towns and Municipalities of the Parsęta River Basin, Związek Miast i Gmin Dorzecza Parsęty	2006-2008	social ecological economic
3A	Elbląski Canal Revitalisation (Miłomłyn-Drużno Lake, Miłomłyn-Zalewo, Miłomłyn-Ostróda-Stare Jablonki)	Elbląg: Elbląski Canal	Regional Water Management Authority in Gdańsk	in preparation	economic social ecological
<b>B. Strategies for river valleys revitalisation within cities</b>					
4B <sup>2)3)</sup>	Programme of Revitalisation and Development of the Bydgoszcz Water Junction	Bydgoszcz: Brda River, Vistula River, Bydgoski Canal	Municipality of Bydgoszcz	in progress	spatial social ecological economic
5B <sup>1)</sup>	Management Project of Warta valley in Poznań: “Poznań – the city on five islands”, “Poznań Waterfront – Warta Valley”	Poznań: Warta River Valley	Poznań University of Technology, Faculty of Architecture	in preparation	spatial social ecological economic
<b>C. Urban revitalisation of riverside districts: residential areas, post-industrial or post-military wastelands</b>					
6C <sup>2) 4)</sup>	Project “Tczew back to the Vistula”	Tczew: Vistula River	Municipality of Tczew	2007	social spatial economic

No.	Name	Location (city, river)	Executing organisation	Status, year of completion	Main goal(s)
7C <sup>2)3)</sup>	Revitalisation of cultural and natural resources of Mill Island and surroundings	Bydgoszcz: Brda River, Młynówka, Międzywodzie	Municipality of Bydgoszcz	2009	social spatial economic
8C <sup>2)4)</sup>	Revitalisation of “Granary Island” and “Olowianka Island”	Gdańsk: Motława River	Municipality of Gdańsk	in progress / under implementation	spatial social economic
9C <sup>1)</sup>	Urban Regeneration Programme (URP) for the city of Poznań – pilot area “Śródka”	Poznań: Warta River, Cybina Canal	Municipality of Poznań	in progress / under implementation	spatial social economic
10C <sup>1)</sup>	The programme „Szczecin Waterfront – Cultural Heritage and Tourism – Stage 1”	Szczecin: Odra River	Municipality of Szczecin	in progress / under implementation	spatial social economic
11C <sup>1)</sup>	City and harbour development in Szczecin and the “Lasztownia” project	Szczecin: Odra River	Municipality of Szczecin	in progress / under implementation	spatial social economic
<b>D. Riverside boulevards and waterfront rehabilitation</b>					
12D	Development of yacht harbour Kolobrzeg	Kolobrzeg: Parsęta River	Municipality of Kolobrzeg	2006	social economic
13D	Warta Boulevards	Gorzów Wlkp.: Warta River	Municipality of Gorzów Wlkp.	realised	social spatial economic
14D	Development of coastal areas Konin – Nadwarciański Boulevard	Konin: Warta River	Municipality of Konin	in progress / under implementation	social economic
15D	Development of the quay of Vistula river and land for recreation, sport, tourism, and leisure	Płock: Vistula River	Municipality of Płock	in progress	social economic spatial
16D <sup>1)</sup>	Development of Vistula Boulevards	Warszawa: Vistula River	Municipality of Warsaw	in preparation	spatial social
17D	Development of Warta river front and harbour	Międzychód: Warta River	Municipality of Międzychód	in preparation	spatial social
18D	Warta Boulevards	Oborniki Wlkp.: Warta River	Municipality of Oborniki Wlkp.	in preparation	spatial social
<b>E. Regeneration and renaturalisation of small water bodies</b>					
19E <sup>2)3)</sup>	Regeneration of Dittrich’s Park in Żyrardów	Żyrardów: Pisia River	Municipality of Kościan	2007	ecological social
20E	Partial opening of the river bed of Struga Toruńska “Bacha”	Toruń: Torunska Stream	Municipality of Toruń	realised	spatial social
21E	Revitalisation of “Martwa Vistula” in Toruń	Toruń: Vistula River	Municipality of Toruń	realised	social ecological
22E <sup>2)4)</sup>	Modernisation of the Bystrzec Stream trough	Gdańsk – Wrzeszcz: Strzyża (Bystrzec) Stream	Municipality of Gdańsk	2002	economic spatial
23E	Modernisation of the Radunia Canal	Gdańsk: Radunia Canal	Municipality of Gdańsk	realised	economic social spatial

No.	Name	Location (city, river)	Executing organisation	Status, year of completion	Main goal(s)
24E <sup>1)</sup>	Project of Wilanowski Culture Park protection plan	Warszawa, Wilanów: Służewiecki Stream, Wilanówka Stream	Municipality of Warsaw	in preparation	ecological social
25E	Development of Obra Channel area	Kościan: Kanál Obry	Municipality of Kościan	under implementation	social spatial economic
<b>Southern Poland</b>					
<b>A. Trans-regional initiation of tourist activities along river valleys and waterways</b>					
26A	“Friendly Klodnica”	Katowice and eight other cities: Klodnica	Informal committee, headed by the Institute for Ecology of Industrial Areas; other members: water administrator, mining enterprise, research institutes, local governments	under implementation	ecological spatial
27A <sup>5)</sup>	Revitalisation of Czarna Przemsza valley among the community – “Common River”	Sosnowiec and other cities: Czarna Przemsza	Society „Common River” (local governments and NGOs)	under implementation	ecological social (recreation ) spatial)
28A	Protection of Biała Przemsza valley	Dąbrowa Górnicza, Olkusz and other cities: Biała Przemsza	Informal committee; City of Slawkow, two associations: “Friends of the White Przemsza” and Lokalna Grupa Działania „Nad Białą Przemszą” w Kluczach	under implementation	ecological social economic planning
<b>B. Strategies for river valley revitalisation within cities</b>					
29B <sup>1)5)</sup>	Revitalisation of „Basin of Bóbr River” area	Bolesławiec: Bóbr		under implementation	social spatial economic
30B <sup>1)</sup>	“Development of Rakówka River valley”	Bełchatów: Rakówka	Municipality of Bełchatów	under implementation	ecological social economic spatial
<b>C. Urban revitalisation of riverside districts: residential areas post-industrial or post-military wastelands</b>					
31C <sup>5)</sup>	Local Programme for Revitalisation of the Old City	Kraków: Vistula	Municipality of Kraków	under implementation	spatial social economic
<b>D. By-river boulevards and waterfronts rehabilitation</b>					
32D	Rawa Boulevards	Katowice, Chorzów, Świętochłowice: Rawa	Municipality of Katowice	under implementation	social spatial ecological
33D <sup>5)</sup>	Revitalisation of Boulevards Xawerego Dunikowskiego in Wrocław	Wrocław: Odra	Municipality of Wrocław	under implementation, begun 2008	spatial social



No.	Name	Location (city, river)	Executing organisation	Status, year of completion	Main goal(s)
34D <sup>2)</sup>	Łódka Channel reconstruction <sup>2</sup>	Łódź: Łódka	Municipality of Łódź	under implementation, begun 2009/2010	spatial economic
35D	Revitalisation of the area around the lagoon and adjacent recreation area in Jędrzejów	Jędrzejów: Brzeźnica	-	under implementation, begun 2009/2010	spatial social
<b>E. Regeneration and renaturalisation of small water bodies</b>					
36E	“Renaturalisation of Sokolówka River”	Łódź: Sokolówka	Municipality of Łódź	under implementation	ecological social spatial economic

### No. 1<sup>)-5</sup>): Results of the evaluation process:

- Evaluation of the planning and realisation process (see chapter 1.6, Table 1.6-1):
  - No. 1<sup>)-2</sup>): Projects with high scores, not fully implemented or in progress
  - No. 2<sup>)-3</sup>): Projects with high scores, fully or partially implemented
- Evaluation of the results of realised projects or projects in progress:
  - No. 3<sup>)-4</sup>): Realised projects with high scores for the comprehensive revitalisation approach and the hydro-ecological assessment (see chapter 1.6, Table 1.6-3)
  - No. 4<sup>)-5</sup>): Realised projects with high scores focused on technical and spatial revitalisation of the city, rather than river renaturalisation (see chapter 1.6, Table 1.6-3)
  - No. 5<sup>)-6</sup>): Projects in progress with highest scores for the comprehensive revitalisation approach (see chapter 1.6, Table 1.6-4)

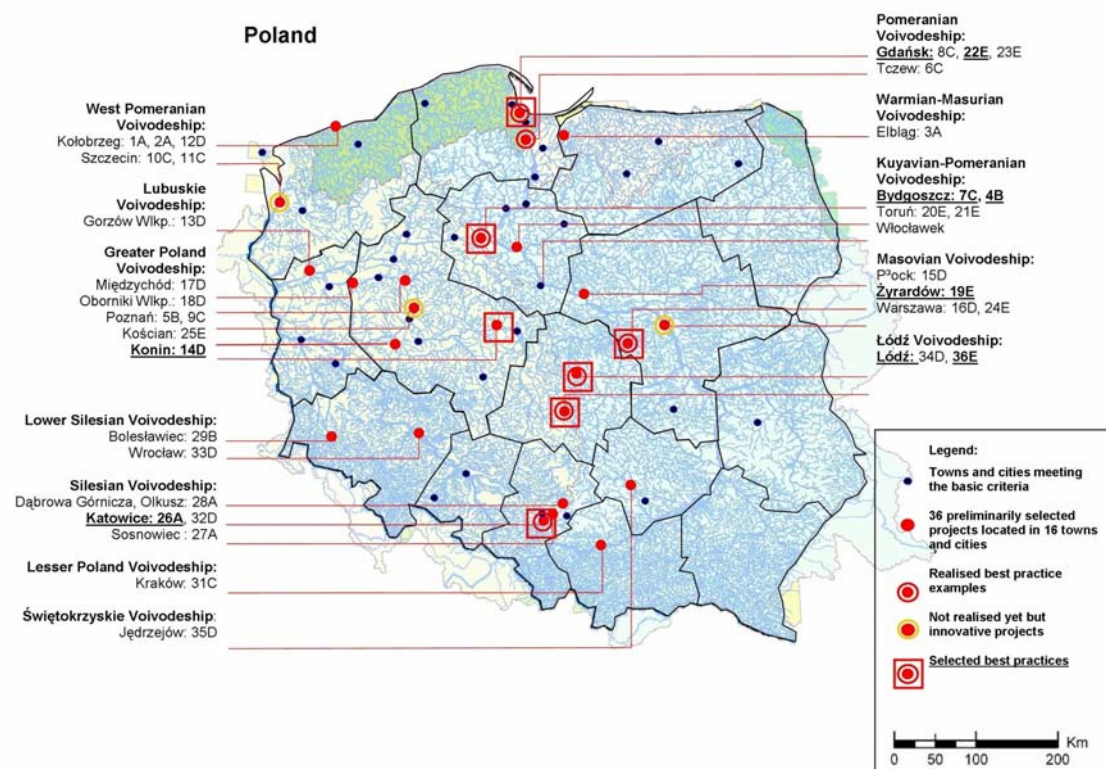


Figure 1.2-3: Locations of 36 preliminary selected best practice projects (© A. Januchta-Szostak, CMI Katowice).



## **Best practice examples in Poland**

## Project 4 B – River Brda: Programme of Revitalisation and Development of Bydgoszcz Water Junction (BWW)

**Location:** Bydgoszcz, Voivodeship Kujawsko-Pomorskie / Poland

**Investor/ executing organisation:** City of Bydgoszcz

**Timeline/Status:** 2004-2005

**Short description:** Mill Island has been revitalised, the “Gwiazda” marina has been rebuilt. The “Zawisza” marina as well as four water tramway stops and three kilometres of boulevards are under construction. The Park near Old Bydgoszcz Channel is being revitalised, the status of Bydgoszcz within the Bydgosko-Toruński Metropolitan Area has been enhanced.

The project is considered an example for other similar projects. The programme has become a factor in the promotion of Bydgoszcz. Thanks to its implementation, Bydgoszcz is considered “A leader in this field”.

**Basic idea:** The basic idea was bringing back the key role of Bydgoszcz on the Berlin-Kaliningrad water course (International Waterway E-70) by rising the quality of Bydgoszcz riverfronts and activating waterways.

### Aims of the project

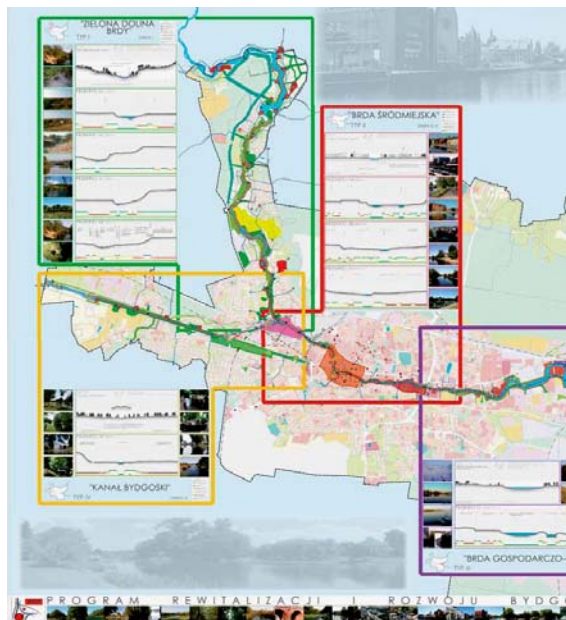
- **Ecological:** Ongoing modernisation of the urban water and waste system as well as dredging Brda and Bydgoszcz Canal, protection of the city’s natural resources.
- **Economic:** Initiating tourism and commercial activities, recreation and transport activities in the Bydgoszcz Water Junction (BWW) area; generating new jobs; determining guidelines for promoting the Bydgoszcz Water Junction (BWW); determining guidelines for investment.
- **Social:** Creating a new identity for urban space, integrating residents and improving the quality of life by restoring and providing access to the new public riverside recreational spaces
- **Planning/Urban development:** determining guidelines and development trends for Bydgoszcz Water Junction; determining guidelines for managing river spaces; proposing planning activities

**Main goal:** The most important aims of the project are social ones. The main goal is to bring back Bydgoszcz’s identity as a city “close to river” and to create Bydgoszcz as “Water Capital City of Poland” and ultimately as the “European Water Centre”, as well as saving the city’s natural and cultural resources.

**Initiative / “The driving force”:** The author of the Programme was a group from the Municipal Town Planning Office of Bydgoszcz (the initiators: Grzegorz Rosa, Stanisław Wroński, Ewa Pietrzak) supported by external experts in the fields of landscape and hydro-technical issues. Decisions were made by the President and City Council of Bydgoszcz.



*Bydgoszcz - the “Gwiazda” marina  
(©Anna Januchta-Szostak)*



*The scheme of selected landscape types of Bydgoszcz Water Junction (© MPU Bydgoszcz)*

**The planning and implementation process:**

- 1. Analysis of literature and documents concerning similar problems and fields of activity
- 2. Elaboration of problems and methodology
- 3. Inventory of urban, natural, historical, hydrotechnical, cultural, landscape, formal-legal, infrastructural, and navigation issues.
- 4. Creation of an interdisciplinary team
- 5. Analysis of material
- 6. Project design
- 7. Implementation of the programme

**Implementation:** The programme is being implemented in an ongoing system. Individual tasks are taken into account in the Budget and Development Plan for the City of Bydgoszcz.

**Maintenance:** City of Bydgoszcz (administration)

**Public participation:** As a part of the Local Revitalisation Programme for the City of Bydgoszcz for the period 2007-2015, the revitalisation of BWW was a subject of social consultations.

**Financing:**

- Project volume: 23,200 PLN (about 5,800 €)
- EU funding: 17,400 PLN (about 4,400 €)
- Public funds: 5,800 PLN (about 1,450 €)

Use of structural funds:

European Regional Development Fund, “Exploitation of inland waterways for regional development” programme financed by Interreg IIIB – Baltic Sea Region

**Key factors for success:** Through the promotion of the programme, the riverside identity of the city as well as the awareness of residents have increased. The crucial factor for success were a coherent vision and well-defined 169 detailed tasks. Other factors were the consistency of the Programme with many other documents such as the strategy of Kujawsko-Pomorskie Voivodeship, the spatial management plan of Kujawsko-Pomorskie Voivodeship, the strategy of Bydgoszcz development, the Study on Conditions and Directions of Spatial Development of Bydgoszcz, the Development Plan of Bydgoszcz for 2009-2011, the Local Revitalisation Programme for Bydgoszcz for the period 2007-2015.

**The most difficult obstacles:** The most difficult obstacles were the lack of interdisciplinary studies on projects of a similar size in Poland, the need for developing appropriate issues and study methods, and the terms resulting from the “In Water” project schedule.



*Brda River, Bydgoszcz downtown (©Anna Januchta-Szostak)*



## Project 7C – River Brda: Revitalisation of cultural and natural resources of Mill Island and surroundings

**Location:** Bydgoszcz, Voivodeship Kujawsko-Pomorskie / Poland

**Investor/executing organisation:** City of Bydgoszcz

**Timeline/Status:** 2004-2011

**Extent:** 6.5 ha

**Short description:** Mill Island was a post-industrial, devastated area in the very heart of Bydgoszcz surrounded by the Brda River and its arm, the Młynówka. The island is separated from the Old Town by the fast-flowing river Brda Młynówka with a view of picturesque architecture of the Venice of Bydgoszcz and the oldest parish church. It is separated from the city centre by the main channel of the river Upper Brda. Mill Island used to be an important economic base for the city; since the late eighteenth century it was the centre of the milling industry. Until the present day it has retained its industrial character with historical granaries, mills, a power plant as well as administrative and dwelling buildings. For years elements of the natural environment and architectural elements have been decaying, a process that has been aggravated by the inefficiency or lack of renovations implemented.



*Location of Mill Island on the background of the downtown of Bydgoszcz (© City of Bydgoszcz)*

Brda River and Bydgoski Canal constitute a part of international waterway E-70. Mill Island is now a green enclave (6.5 ha) of unique spatial, social, and landscape resources subjected to full conservation protection. The project provides for the renovation and adaptation of five historical buildings situated on Mill Island in Bydgoszcz for museum functions (Leon Wyczółkowski District Museum in Bydgoszcz). The aim of the project is to use the island's potential in the field of culture, tourism, and leisure activities by renovating historical buildings and providing access to collections of artefacts combined with their concurrent protection.

**Basic idea:** Transformation of degraded post-industrial area into space of culture, leisure and tourism.

### Aims of the project

- **Ecological:** reconstruction of the Międzywodzie Canal
- **Economic:** attracting entrepreneurs and consumers
- **Social:** accessibility and safety improvement, social integration, new functions of former industrial area: culture, sport and recreation, leisure and tourism
- **Planning/urban development:** renovation and adaptation of historical architecture, enhancing the aesthetic quality of the island and connecting it with the city centre.

**Initiative / “The driving force”:** The initiative group of people from Municipality Office in Bydgoszcz

**The planning and implementation process:** The preparation and planning process started in 2004-2005. The project is a coherent part of, in particular the National Development Strategy, the National Strategic Reference Framework, the Development Strategy of the Kujawsko-Pomorskie, the Local Regeneration Plan, the Development Strategy and the Cultural Policy of Bydgoszcz City.

The project was realised in four stages (2006-2011): The first stage (“Revitalisation of Mill Island for business development” 2006-2007) covered the renovation and adaptation of a historical building at 6 Mennica Str. for the needs of a new job and business centre, the construction of three footbridges linking the island with the city and a construction of a complex of park docks recreating the historical Międzywodzie canal.

The second stage (“Renovation of cultural heritage objects on Mill Island in Bydgoszcz” 2007-2009) comprised the renovation and adaptation of five historical buildings for museum needs. The buildings form a unique complex of industrial architecture on Mill Island.

Third stage (“Construction of leisure infrastructure on Mill Island and in its closest surroundings” 2008-2010) was dedicated to the renovation of a historical street, construction of an amphitheatre and a playground, development of green areas and reconstruction of wharfs.

Fourth stage (“Revitalisation of degraded sports areas on Mill Island” 2009-2011) is aiming at the creation of a new marina and reconstruction of wharfs in the northern part of the Island.

The process was determined by “Manual procedures for the management of investment projects financed from European funds in the City of Bydgoszcz”.



*Bydgoszcz – Miedzynodzie Canal (©Anna Januchta-Szostak)*



*New footbridge over the Młynówka and renovated Rother's Mill on Mill Island in Bydgoszcz (©Anna Januchta-Szostak)*

**Implementation:** Wide range of general construction works (sanitary, electric, teletechnical, heating, ventilation and air conditioning) and specialist work (construction, conservation) was executed. All tasks were performed in compliance with accepted technical documentation complemented by additional elements resulting from supervision requirements as well as expert opinions prepared during implementation. The work was executed in accordance with binding legal regulations and terms and conditions of the project co-financing agreement.

**Public participation:** The programme and the possibilities connected with its realisation have been presented to non-governmental organisations by direct social communication, meetings of citizens with employees during processing, meetings of the president (co-ordinating team) with citizens during application submission, meetings of the president with citizens of the districts in self-governments, mail and e-mail, telephone calls, intermediate social communication, contact with journalists (press, radio, television), press information, conference, interviews, leaflets, bulletins, brochures and publications. An advertising campaign with neon signs was also conducted.

**Financing:** The project was implemented by the City of Bydgoszcz and funded by the European Regional Development Fund and the European Economic Area Financial Mechanism within the Priority Area of Conservation of European Cultural Heritage

**Analysis:** The project realisation protected the unique values of post-industrial architecture and helped to restore the identity of Mill Island. It improved the quality of cultural infrastructure and ensured safety and social attractiveness of public buildings and open spaces. The new marina will also contribute to activating waterways as well as the development of tourism.



*The new marina project on Mill Island (©Laboratorium Projektowe ZIVVA - Tomasz Rokicki)*

**The most difficult obstacles** include lack of experience and methodology for preparing integrated urban-nature revitalisation projects, legal instability, constant regulation changes as well as problems resulting from low local community involvement and a low level of interest among entrepreneurs.

**The key factors for success** were, among others: opportunities and abilities for acquiring EU funds, innovative design as well as the good cooperation, willingness and determination of the people engaged in the projects.

## Project 14D – River Warta: River areas management in Konin – Nadwarciański Boulevard

**Location:** Konin, Voivodeship Wielkopolskie / Poland

**Investor/executing organisation:** President of Konin, Treasurer of Konin

**Timeline/Status:** 2008-2010 (planned) - in progress

**Extent:** 3.36 ha

**Short description:** The project envisages the construction of a two-tier pedestrian area (one path close to the river) with a café, pub, restaurant, gallery and an amphitheatre for 400 seats, as well as construction of a sailing marina. Also planned are sports fields, including beach ball, public squares and five artists' cottages. The project provides recreational riverside places and creates conditions for safe cycling. The boulevard will also be connected to a local park.

**Basic idea:** The basic idea of the project is to build a new publicly accessible tourist space in the city centre by improving the aesthetics of the degraded inner-city of Konin, establishing new touristic and recreational objects as well as restoring the river to the city, "Face the river".

### Aims of the project

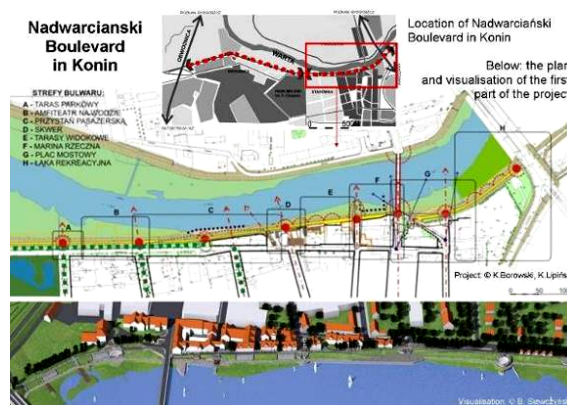
- **economic:** activation of the Warta River waterway, affecting the development of businesses from the hotel and catering industry around the old town, while contributing to employment growth;
- **social:** improvement of the safety and attractiveness of the riverside areas, increasing the accessibility of the Warta River banks and their recreational potential; contributing to socio-economic development;
- **planning/urban development:** connecting the river with urban fabric new public spaces as well as rising the visual and functional quality of the Warta riverfronts.

**Main goal:** The main goal of the project has been defined as "The growth of tourist attractiveness of Konin and increase of the local tourism sector contribution." The project will affect the use of local potential based on the Warta River flowing through the historic quarter of Konin. In addition, new development will improve the technical condition of infrastructure which currently does not allow for creating attractive touristic products in this area. The project will contribute to socio-economic development of the city, impacting development of companies in the hotel and catering sector in the Old Town area, which will indirectly contribute to increasing employment opportunities.

**Initiative / "The driving force":** Mr Kazimierz Lipinski, Konin City Councilman

**The planning and implementation process:** Commencement of the tendering procedure was in 2008. The substantial implementation of the project was planned for 2009/2010 (now underway). The investment is compatible with the strategic documents of national, regional and local importance, including:

- horizontal objective "spatial governance" of the Wielkopolska Region Development Strategy until 2020; operational objective 2.4, "Increasing the share of tourist and recreational facilities in the region's economy"
- Tourism Development Strategy in Wielkopolskie Voivodeship, in particular with regard to the operational objective no. 5, Development of trails and waterways, including the Great Loop in Wielkopolskie, Kujawskie and Lubuskie voivodeships
- Konin Development Strategy for 2007-2015 - operational objective 1.1 "Creating conditions for increasing competition and business development", and operational objective 1.3, "Development of tourism"



*The location and project of the Nadwarciański Boulevard in Konin (© K. Borowski, K. Lipiński)*

**Implementation:** Completion of the investment phase was planned for mid-November 2010, however the full construction of the boulevard will be completed in June 2011 because of three floods which occurred in 2010.

The implementation of the project included: technical infrastructure improvement (water supply and sewage system, electrical wiring, lighting etc), construction of terraces, slopes and embankments, spatial arrangement of the boulevard and several public



squares (pavings, plants, street furniture, etc.) as well as the construction of the amphitheatre and marina. Simultaneously the buildings along the boulevard were renovated to improve the visual quality of waterfronts and provide the room for commercial and residential functions.

**Public participation:** To ensure public participation, there were meetings of the inhabitants of residential buildings from quarters located in the area selected for revitalisation and all interested residents; for example in 2009 a public consultation was held in Konin on the merits of the investment. Moreover the promotion of the project included organisation of numerous competitions, exhibitions, conferences and multi-disciplinary debates on the local and regional as well as on the national level.

**Financing:** Mostly financed from EU funding – from priority VI - Tourism and cultural environment: 10,369,029 PLN (about 2,600,000 €)  
Public funds: 5,583,323 PLN (about 1,400,000 €)

**The most difficult obstacles:** The most important barrier was the prolonged establishment of the spatial management plan “Framework for the Environment”, which was the prerequisite for the investment.



*Work on the project implementation in 2010*



*The construction site in August 2010 – paving detail (©J. Kończak)*



*The Amphitheatre on Water (© K.Borowski, K.Lipiński, visualisation: B. Siemczyński)*



*The viewpoint terraces (© K.Borowski, K.Lipiński, visualisation: B. Siemczyński)*

## Project 19E – River Pisia: Renovation of the historic Dittrich Park in Żyrardów

**Location:** Żyrardów / Poland

**Investor/executing organisation:** Żyrardów City Hall

**Timeline/Status:** 2004–2007

**Extent:** 58,000 m<sup>2</sup>

**Short description:** The Project of Renovation of the historic Dittrich's Park, which was a part of Dittrich's factory settlement in Żyrardów, was covered by the Local Regeneration Programme for the City of Żyrardów, which began in 2004. Żyrardowska factory settlement, entered in the register of historic monuments in 1979, is the only monument in Europe which is almost entirely preserved as a "living" urban-architectural system—a perfect example of an industrial town of the late nineteenth and early twentieth century. Currently, the factory settlement is a historic city centre and the majority of buildings still fully perform their functions. The project included the development of 58,000 m<sup>2</sup> of park together with Dittrich's villa, small architecture and landscape architecture.

**Basic idea:** The basic idea was to restore the natural values of Pisia river, the social revival of the neglected Dittrich's Park, and to improve the image of the city, the functionality and aesthetics of urban public space as well as the development of cultural-recreational facilities.

### Aims of the project

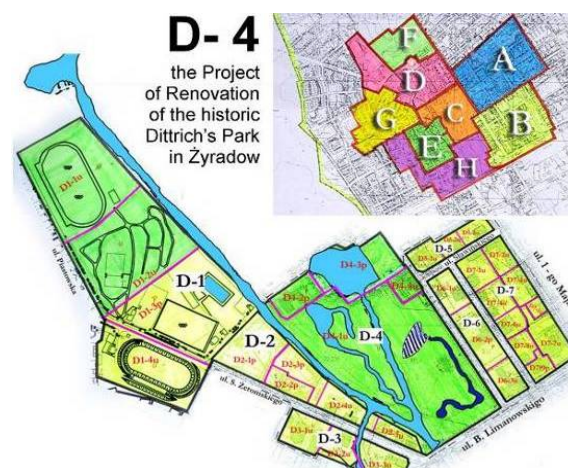
- **ecological:** regeneration and rehabilitation of existing parks, regeneration of watercourses
- **economic:** increase of the attractiveness of the town for citizens and entrepreneurs, benefits of better recreation for local population
- **social:** renovation of public infrastructure connected with the development of recreational and cultural functions; creating a safety zone and preventing crime in urban parks
- **planning/urban development:** improving the functionality and aesthetics of the public space, revitalising the infrastructure in degraded areas, improving the city's image in the perception of the citizens and tourists

**Main goal:** Social revival through revitalisation and rehabilitation of degraded urban areas

**Initiative / "The driving force":** The main initiator was the President of City of Żyrardów.

**The planning and implementation process:** The beginning of interest in revitalisation dates back to the 1970s, even though back then only the revaluation and modernisation of the historic factory settlement was discussed. In 1996 the Żyrardów Development

Strategy for the period up to 2010 was prepared and approved. In 2000 the city prepared guidelines for the revitalisation programme with the participation of national and foreign experts. In 2003 Żyrardów City Council passed a resolution on preparing a revitalisation programme. A coordination team and a programme team were established. The project was presented to the public and passed by the Żyrardów City Council in 2003. Several areas of concern were designated: historic residential area (36 ha) and post-factory historical buildings area (10 ha), both subject to strict conservational protection; residential area with blocks of flats, degraded residential area. In these areas deficiencies in basic technical infrastructure, degradation of buildings, environmental pollution, unemployment, difficult living conditions, crime and low levels of social activity are observed. The area has been divided into nine complexes marked with letters from A to I. The location and extent of the Project of Renovation of the Dittrich's Park is marked D-4.



*The plan of renovation of the historic Dittrich's Park; in the background complexes in the area of the LRP (© City of Żyrardów)*

**Implementation:** The project was implemented in two stages: the first stage (15 November 2004 – 31. October 2007) included: technical infrastructure improvement (installing modern lighting and visual monitoring systems in the whole park, building public lavatories), spatial arrangement of the park (plants, paths, footbridges, fences, playground, street furniture etc) as well as the reconstruction of the amphitheatre and fountain by the entrance. In the second stage (09.02.2007 – 31.10. 2007) the hydro-technical



infrastructure was modernised (renovating „Luca” weir together with repairing Pisia river embankments and creating an overflow), the small water bodies were reconstructed in their natural form and the Museum of the Western Masovia Region located in Dittrich’s villa was renovated.

The added value of the project is the unique atmosphere of the park, which is appreciated by citizens and tourists. Classical concerts are organised in the amphitheatre in front of the renovated Dittrich’s villa.

**Public participation:** As part of measures to ensure public participation, meetings were held with inhabitants of residential buildings located in the area and with the authorities of the local housing association and entrepreneurs interested in investing in post industrial areas. Additional assumptions of the programme are discussed in the relevant self-government units. The programme is presented to non-governmental organisations, which are increasingly eager to become active in the planning and realisation process. It was discussed with interested parties at the stage of planning and implementation, e.g. school community, nearby entrepreneurs by general and individual meetings, mail and e-mail, telephone calls, intermediate social communication, contact with journalists from the media, radio, television (press information, conference, interviews), print material (regular, periodical and occasional).



*The fork of the Pisia River in Dittrich’s Park  
(©City of Żyrardów)*

#### **Financing:**

Stage I:

EU funds: 2,251,866 PLN (74,41 %) (ca. 560,000 €)

State budget: 300,208 PLN (9,92 %) (ca. 75,000 €)

City budget: 474,220 PLN (15,67 %) (ca. 120,000 €)

Stage II:

EU funds: 1,093,746 PLN (65 %) (ca. 275,000 €)

State budget: 168,268 PLN (10 %) (ca. 42,000 €)

City budget: 420,671 PLN (25 %) (ca. 105,000 €)

**The most difficult obstacles:** The most difficult obstacles were lack of local statistics (various databases of the various spheres of life, at different levels of detail); lack of project management methodology; no other locally-specific financial mechanisms have been planned or implemented; lack of mechanisms for public participation; property ownership issues; no external funding for restoration and modernisation of the existing housing (resources); the large area covered by the redevelopment and the resulting funding needs.

**Key factors for success:** Żyrardów’s success in obtaining European funds was a fact which helped to show the city in a decidedly positive light. This initiated changes in perceptions of the city, both by the residents and external observers. Consequently, this resulted in the interest of the media, visitors and investors and led to the revitalisation of the most degraded land in the city.



*Summer Sunday in Dittrich’s Park (©City of Żyrardów)*



*Meandering stream in Dittrich’s Park – Autumn 2009  
(©Anna Januchta-Szostak)*

## Project 22E – Bystrzec Stream: Modernisation of Bystrzec Stream riverbed in the section from Grażyny Street to Waryńskiego Street

**Location:** Gdańsk / Poland

**Investor/executing organisation:** Gdansk City Hall

**Timeline/Status:** Phase I: 1997–1999; Phase II: 2001–2002

**Extent:** 2,15 ha – two sections of river embankments; 1,30 ha – Park Nad Strzyżą

**Short description:** Bystrzec Stream (also referred to as Strzyża) runs from the western part of Wrzeszcz to the centre of Gdańsk, where it flows into the Dead Vistula. The watercourse is used as an element of the rainwater drainage system. Within the study area it is channelled and covered in small sections, flows through Lower Wrzeszcz, a nineteenth century historic residential district of significant cultural value, which formed the identity of the former Wrzeszcz. Because of trees of significant natural value along the edge of the existing stream, its course was adjusted in several sections. The draft of the plan for land management consists of a descriptive part, drawings, land use and technical details of the riverbed, embankments, walkways, footbridges and architectural details of fences and railings, referring to the character of historical architecture of the surrounding buildings.

**Basic idea:** The basic idea was to regulate the stream for the purpose of flood protection and to increase the aesthetic level of the water front in the historic district as well as enhancing the accessibility of the river banks, as an element of urban revitalisation in Lower Wrzeszcz.

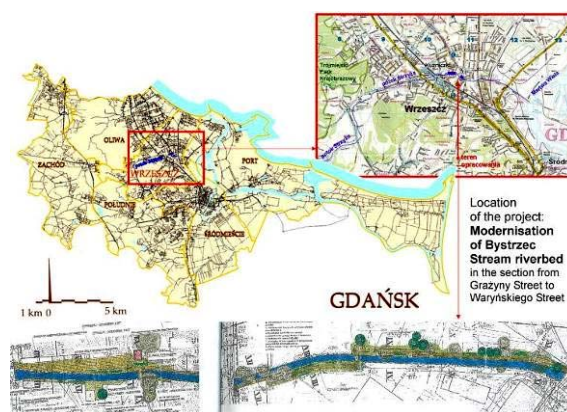
### Aims of the project

- **ecological:** The project was designed to protect valuable existing trees, and plant further trees and shrubs, including ash, maple, oak, willow, hawthorn, hornbeam, sorb, white dogwood, forsythia and honeysuckle. This resulted in an increase in biodiversity.
- **economic:** The project aimed to implement flood protection and increase the quality of public spaces, resulting in higher property values and enhanced attractiveness for entrepreneurs.
- **social:** The project contributed to the improvement of the safety and attractiveness of the neighbourhood by increasing the accessibility of recreational areas for citizens as well as meeting the needs of all social groups.
- **planning/urban development:** Revitalisation of the degraded area of cultural significance and great beauty of the historic architecture built at the turn of the nineteenth and twentieth century.

**Main goal:** The main objective was to secure the necessary capacity for the stream, thus providing protection against flooding of the land directly adjacent to the stream.

**Initiative / “The driving force”:** The project was supervised by the authorities of the Municipality of Gdansk, but during the project’s execution phase, the supervisor was the Gdańsk Drainage Company.

**The planning and implementation process:** The basis of the work was the decision concerning zoning and land development. The technical project was created in 1997, the water permit was issued in February 1998; the planning permission was received in March 1998. Based on the permits, the first phase was then implemented - the modernisation of the riverbed in the section from the mouth of the creek Bystrzec II to the bridge under Wyspiańskiego Street. The second phase - upgrading the stream from Waryńskiego Street to Grażyna Street was executed on the basis of an order of the Voivodeship Inspectorate of Construction Supervision issued in August 2001.



*Location of the project: Modernisation of Bystrzec Stream riverbed in Gdańsk (©Archives of Gdańsk Development Office)*



**Implementation:** The site is located within an area designated for rehabilitation of existing buildings and infrastructure. Planned activities: regulation of water through the implementation of a relief channel (collector) for the stream Strzyża in Wajdeloty Street and the introduction of lighting, landscaping and new plantings. An open channel faced with clinker brick was routed between the historic residential buildings. Decorative footbridges, walkways and stairs were built as elements linking the river to the urban landscape. Simultaneously Park Nad Strzyżą was created increasing the accessibility and attractiveness of recreational riverside areas. Groups of trees and shrubs were planted next to the stream and less diverse vegetation growing on the shore was removed. The expected results are preservation and visibility of the vegetation's value, as well as proper drainage of the area.

**Public participation:** Under the existing procedure, all administrative decisions were presented to owners of land located adjacent to the construction site. In 1998 a water hearing was held, on the basis of reported claims. The water permit did not include the planned footbridge over the stream. No public consultation process was required at that time, however information on investment prospects was presented at the water hearing. Information about the project was also sent to citizens and a meeting with the initiators of the idea and subsequent contractors was organised in order to obtain additional comments and suggestions.

**Financing:**

First phase:

Public funds: 1,065,000- PLN (about 270,000 €)

Second phase:

Public funds: 1,175,100 PLN (about 300,000 €)

**The most difficult obstacles:**

- Landowners of adjacent areas were unconvinced of the necessity and merits of the project;
- Unavailable information about the existing channel structure in the area of bridges and passageways under the buildings.

**The key factors for success:**

- Commitment and determination of those involved in the project and good cooperation between the project and realisation teams.
- Patient co-operation with the local community based on complete information about investment plans



*The upper retention reservoir on Bystrzecz Stream  
(© Gdańsk Development Office)*



*Architectural details of the Bystrzecz embankments  
in the historical district (© Gdańsk Development Office)*



**Bystrzecz Stream before ...**



**... and after revitalisation**

*Bystrzecz Stream near Górny Młyn before and after revitalisation (© Gdańsk Development Office)*

## Project 26A – Kłodnica River: Friendly Kłodnica

**Location:** Katowice (Sources of Kłodnica) and Kędzierzyn Koźle (Estuary of Kłodnica) / Poland

**Investor/executing organisation:** Group of twenty-two companies, municipalities, university, institutes

**Timeline/Status:** 2005-2013

**Short description:** The “Friendly Kłodnica” Programme aims to combine and coordinate the actions initiated and conducted independently by other programmes made by local governments, as well as prepare new proposals for activities to improve water quality and the environment of the Kłodnica River.

**Basic idea:** The basic idea is to achieve a socially acceptable water quality of the river and its tributaries, namely pure water that does not repel residents and visitors due to its unpleasant smell or unnatural colour. In addition, the river and its riverine areas in the urban-industrial area should no longer be disfiguring elements of the landscape but instead enhance its aesthetic and natural value. For local communities it is also important that the river and its valley are conducive to recreation and offer opportunities for a rewarding aesthetic experience.

### Aims of the project

**Main goal:** Restoration of the comprehensive purity of the waters of the Kłodnica River (improvement of water quality and environment of the Kłodnica River; arrangement of water sewage management in particular communities).

**Initiative / “The driving force”:** The initiative was taken by the Institute for Ecology of Industrial Areas (IETU) in Katowice.

**The planning and implementation process:** The project executives were: Gliwice Electricity-Energetic Works, Institute for Ecology of Industrial Areas in Katowice, Regional Water Management Bureau in Gliwice, as well as Nature Heritage Center of Upper Silesia, Central Mining Institute, Institute of Environmental Engineering Sciences PAN, Coal Company, Centre for Research and Environmental Control, Silesian University, Silesian Marshal’s Office, State Mining Authority in Katowice, Institute of Inorganic Chemistry, the Municipality Świętochłowice and nine municipalities situated within the Kłodnica catchment (Bytom, Chorzów, Gierałtowice, Gliwice, Katowice, Mikołów, Ornontowice, Ruda Śląska, Zabrze). The “Friendly Kłodnica” programme coordinator is the Institute for Ecology of Industrial Areas in Katowice.

The following measures are planned:

- Reduction of pollutant loads from towns, municipalities and industrial facilities
- elimination of area pollution sources from municipal and industrial areas which are not connected to the sewage system
- minimisation of the negative impact of mining damage.



*Kłodnica River in Katowice (©Institute for Ecology of Industrial Areas in Katowice)*

**Public participation:** Meetings with the residents have been organised and in the course of the project, more and more people have participated in planning the next steps in the revitalisation process. The programme and the possibilities connected with its realisation have been also presented to non-governmental organisations. The programme was discussed with interested parties at the stage of planning and implementation, e.g. school community, nearby entrepreneurs (in the case of planned street renovation) through general and individual meetings, mail and e-mail, telephone calls, intermediate social communication, contact with journalists (print, radio, television), press information, conferences, interviews), leaflets, bulletins, brochures, publications (regular, periodical and occasional), website.



**Financing:** Upper Silesian Electrical Power Engineering Plant, a joint stock company and Vattenfall have financed work connected with coordination of the project by the IETU. Further project financial sources were EU funds, National Fund for Environmental Protection and Water Management, Voivodeship Fund for Environmental Protection and Water Management, EcoFund (EKOFUNDUSZ), industrial plants.

**Analysis**

Research has been conducted on the improvement of water quality and the environment of the Klodnica River, as well as on water sewage management in specific communities.

**The most difficult obstacles:** Problems with acquiring funds as well as some issues related to Polish law were the most difficult obstacles.

**Key factors for success:** Good cooperation between cities was a key factor for success.

## Project 30 B – Rakówka River: Renaturalisation of Rakówka River

**Location:** Belchatów / Poland

**Investor/executing organisation:** City of Belchatów

**Timeline/Status:** start in 1996, in progress

**Short description:** At first, Rakówka River in Olszewskich Park was revitalised in 1996. One year later (in 1997) another part of the river and in 1999 the reservoir were reconstructed. These revitalisation efforts convinced people that such projects benefit the city and the river, and – as a result - city authorities have been encouraged to continue work on the Rakówka River's revitalisation.

**Basic idea:** The basic idea was protection and natural development of Rakówka valley - mainly by organising sewage management.

### Aims of the project

- **ecological:** The project included aspects of maintaining the continuity of the ecological corridor, as well as ongoing modernisation of the urban water and waste system.
- **economic:** Increasing the natural value of the city by promoting tourism and commercial activities.
- **social:** Integrating residents and improving the quality of life by restoring and providing access to new recreational public spaces; convincing people that it is possible to “do something beneficial”.
- **planning/urban development:** proposal of planning activities

**Main goal:** The main goal was organising the water-sewage management of the city.



(©City Hall of Belchatów data base)

**Initiative / „the driving force”:** Starting point was a spontaneous idea about revitalising one part of the river – in Olszewskich Park – to make this part of the city a better place for daily life and recreation.

**The planning and implementation process:** Study on Conditions and Directions for the Development of the City Belchatów Commune as "protection of the Rakówka valley" – and a multi-year investment plan for the period 2005-2008 were established. The implementation process was divided into stages. The eighth and last should be completed by the end of September 2011.



(©City Hall of Belchatów)

**Public participation:** As part of public participation meetings were held with the inhabitants of residential buildings from quarters in the area selected for revitalisation. In the more than 13 years of the project duration, more and more people have participated in planning future revitalisation measures. The programme and the possibilities connected with its realisation have also been presented to non-governmental organisations.

**Financing:** There is no data on the project's cost in design stage, but the costs during the implementation stage have been , to the end of 2010, 2,058,000 PLN (about 520,000 €). In the eighth stage – which should be completed by the end of September 2011 – the estimated costs are about 600,000 PLN (ca 151,600 €)

**Key factors for success** were good communication with residents, increase in cooperation between the municipal entities as well as the interest and involvement of the residents.

**The most difficult obstacle** was the difficulty in obtaining funds.



(©City Hall of Betschátón)



## Project 36E – Sokołówka River: Renaturalisation of Sokołówka River

**Location:** Łódź / Poland

**Investor/executing organisation:** City of Łódź

**Timeline/Status:** 1990s-2006

**Extent:** area of a few kilometres of river with reservoirs of about 2.00 hectares (ha) of water surface and a few ha of surroundings

**Short description:** Years ago, a vast 45 hectare estate in the valley Sokolowka (left-bank tributary of Bzura) belonged to one of the wealthiest industrialists in Lodz Julius Heinzl, who built a palatial residence surrounded by a valuable landscape park near Zgierska Street. On the section below Zgierska Street (up to the mouth of the Bzura river) Sokolowka valley is characterised by unique natural beauty and little evidence of intervention by humans. Thus, this part of the river lends itself to renaturalisation of the valley. Work on renaturalisation of Sokolowka River has been realised in two stages.



„Zgierska” reservoir on Sokołówka River  
(©Małgorzata Kopernik)

The reservoir “Zgierska”, covering an area of 1.44 ha of water surface, was rebuilt first; it was formed in the hollow of the old fish pond called Chachuly (from the name of the owner of the pond). The area around the reservoir is structured; it has been sown with grass and planted with trees and shrubs. Below the reservoir there are walking paths and space on the playground and park for animals. The reservoir became a recreational area for residents as well as a waterfowl refuge. In 2004 construction work on the reservoir “Zgierska” was completed. Reservoir “Teresa” is on today’s “Leafy” settlement, a site formerly occupied by the Kordackiego ponds. Its current name comes from a nearby street, St. Teresa of the Child Jesus. The reservoir covers an area of 0.5 ha and contains between 3 and 5000 cubic meters of water; at the

deepest point the depth is one meter. An island with an area of 200 square meters is also located on the reservoir. It is surrounded by old trees, and the basin is fed with water from the Sokolowka through an underground channel. “Teresa” reservoir was reconstructed in 2006.

**Basic idea:** The renaturalisation of the river valley consists of the reconstruction of four reservoirs and the natural riverbed and riparian vegetation.

### Aims of the project

- **ecological:** creation of new recreation areas for residents, improvement of the microclimate, improve the attractiveness of residence, improve the aesthetics of the city, improve the water quality of surface waters, remove nuisances in the form of unpaved roads, allow safe drainage of rain water, environmental management and restoration of neglected parts of the existing urban landscape, increase environmental awareness of residents
- **economic:** promote tourism and commercial activities, as well as recreation
- **social:** creating a new identity for urban space, integrating residents and improving the quality of life by restoring and creating access to new recreational public spaces
- **planning/urban development:** proposal of planning activities, maintaining the environmental quality of the city

**Main goal:** The main goals were the creation of new recreation areas for residents as well as the revitalisation of the cultural heritage and natural value of the Sokołówka River valley .

**Initiative / „the driving force”:** The main premise was fruitful cooperation between the City of Łódź and researchers from the University of Łódź.

**The planning and implementation process:** The concept of Sokolowka river valley renaturalisation was created in the 1990s, co-created by the city authorities and researchers from the University of Lodz. The first stage of the project was completed in 2004, the second one in 2006. Work on renaturalisation of Sokolowka river were realised in two stages.



„Teresy” reservoir on Sokółka River, completed in 2006  
(©Małgorzata Kopernik)

**Public participation:** The main participants in the project are Łódź City Hall, which is responsible for investment and organisational aspects of the project (including public participation), University of Łódź, responsible for the academic concept of development, and many NGOs.

Learning Alliance – a platform which brings together representatives of cities, companies, the University of Łódź and other research units was created. Meetings were organised with the inhabitants of residential buildings from quarters in the area selected for revitalisation, meetings with the authorities of the local housing association as well as meetings with entrepreneurs interested in investing in port-industrial areas. Information was provided on the website of the City Hall as a platform for information and discussion. Other methods to achieve public awareness of the project were information sessions in schools and with residents of surrounding neighbourhoods as well as press (and web) releases.



Information plan about Sokółka river (made before investments)

**Financing:** Funding from the European Union (35%) within the SWITCH project (6<sup>th</sup> Framework Programme)

**Key factors for success** were an increase in co-operation between the municipal entities, the interest and involvement of the residents as well as funding by the SWITCH project.

**The most difficult obstacle** was the difficulty in obtaining funds.



„Teresy” reservoir (©Małgorzata Kopernik)

---

## Analysis

Thirty-six projects were analysed in detail with regard to the planning and realisation process as well as the results of project realisation according to the approach described above by allocating scores (see chapter 1.6, Tables 1.6.-1 to 1.6.-4).

### Assessment of the planning and realisation process

Although the assessment of the planning and realisation process is based on a fragmentary database, evaluation of the projects was possible. Sixteen projects had high scores: Eight of them have not been fully implemented or are in progress, seven projects are fully or partially implemented. They are marked with <sup>1)</sup> respectively <sup>2)</sup> in Table 1.2-2.

### Assessment of the results of the projects

The assessment of the results of the projects which have already been implemented (see chapter 1.6, Table 1.6-3) showed that from twelve projects, which have been realised in northern Poland, three projects have the most comprehensive approach in terms of urban riverside revitalisation with the highest scores regarding the hydro-ecological assessment (marked with <sup>3)</sup> in Table 1.2-2). Another three projects received high final scores but were rather focused on revitalisation of the city and urban space (socio-economic sphere of the city rather than natural aspects, marked with <sup>4)</sup>). Among the projects in progress in southern Poland, four projects have the most comprehensive approach (chapter 1.6, Table 1.6-4). The projects are marked with <sup>5)</sup> in Table 1.2-2.

## Conclusion

It can be concluded, that:

- most of the projects being implemented in Polish cities do not involve a comprehensive approach to river revitalisation; they do not take into consideration and balance ecological, planning, social as well as economic aspects;
- no projects oriented towards ecological restoration of urban rivers (renaturalisation) have been finalised; some are being implemented in the southern part of Poland, but in fact no river fragment has been ecologically restored in Polish cities;
- in the north of Poland some revitalisation activities were finalised, but they focused on socio-economic revitalisation of urban districts rather than on environmental aspects;
- most of the projects deal with the elimination of pollution and the creation of riverside recreation areas and do not aim at improving the ecological status and potential of the rivers and their valleys;
- no practice of land repurchasing for the needs of revitalisation has been found;
- under the headline “biodiversity” we often find measures aimed at protecting existing natural resources or introducing green areas that do not include the restoration of biotopes or habitats;
- in the cities, “river corridor” is used as a legal concept;
- improvements needed for managing the local catchment area were considered only in two projects;
- in southern Poland the regional projects now being implemented are in fact based on local projects. They do not constitute any “added value” on the sub-basin scale;
- in Upper Silesia no project took increasing the retention capacity into account; and
- there is no local long-term programme specifically dedicated to rivers in southern Poland; projects are implemented within the framework of the use of structural funds and do not go beyond the horizon of the year 2013.



This analysis has identified the most difficult and widespread issues in Poland (southern and northern Poland) and their solutions as well as key factors for success:

Table 1.2-3: The most difficult and widespread issues and northern and southern Poland and their solutions as well as key factors of success (© A. Januchta-Szostak, CMI Katowice).

The most difficult issues	Applied solutions	Key success factors
<b>Design and methodology</b>		
Lack of experience with and methodology for integral urban-natural revitalisation projects	The successful search for planning methods which can be adapted to local specific characters (project no. 4B - Bydgoszcz Water Junction)	Innovation and planning and design on own-initiative, staff training, exchange of experiences with the Revitalisation Forum, methodology studies from other EU countries
Lack of project management methods, poor coordination of project teams and a lack of reporting from the current monitoring implementation	After negative experience in Zyrardow (project no. 19E), project cycle management methodology is used in planning, implementing and monitoring individual tasks	Will and determination of those involved in the project, good cooperation between the realisation and the design project teams
Lack of GIS databases about catchment areas; statistical data connected on different spheres of city life not compatible: the difference in the extent and levels of detailed studies prevents the comparison of data	For example a GIS database was created first, which was the basis for elaboration of a plan and a wetlands management system in project 1A for the Parsety River catchment.	Exchange of information and collaboration between local government, designers and researchers to create databases and development projects, implementation of integrated planning methods
<b>Legislative and financial-management issue</b>		
Lack of legislative mechanisms, public-private partnership models and local financial mechanisms verified under Polish conditions; lack of external funding for improvement and modernisation of housing (in the case of city revitalisation)	Financing by the city budget, state and European funds	Successes in acquiring funding from European sources by the local governments were very important so that revitalisation projects could be realised and media coverage improved the city's image in the opinion of residents, tourists and foreign investors
Funding programmes for revitalisation projects (ZPORR Integrated Regional Operational Programme, RPO Regional Operational Programmes) focus only on social, economic and spatial aspects. Thus, projects aiming at natural revitalisation cannot be financed by these programmes (lack of this kind of criteria in the definition of revitalisation)	Customising the task of revitalising to the funding priorities of the IROP Integrated Regional Operational Programme or receipt of funds from other funds and programmes such as the ERDF under the INTERREG III A, PHARE Fund, the Cohesion Fund and by EEA Financial Mechanism and Norwegian Financial Mechanism	
Instability of law and continuous changes of regulation in the first period of Polish accession to the EU and with regard to European funds, resulting in delays in refunds and the need for subsequent agreements	Loans raised by local governments, issue of municipal bonds	
<b>Social issues</b>		
Problems of property, lack of conviction regarding the need for and value of the project for the landowners of adjacent areas, fear of rising property values and thus rent hikes	Raising the consciousness of the society through meetings, discussions and workshops with residents (e.g. 6C - Tczew, 9C - Poznan, Srodka district, 15D - Plock); media releases about revitalisation projects	Activating the rank-and-file (bottom-up approach) to stimulate local initiatives, introduction of educational programmes and public consultation

## Recommendations

Initial reconnaissance of the situation of riverside spaces in Poland as well as the analysis of both failed and successful projects of river valleys' revitalisation make it possible to identify twelve issues which can be formulated as recommendations for the realisation of similar projects (mainly in accord with WiN, n.d. and Januchta-Szostak, 2010):

- **Complexity and continuity of riverside areas' revitalisation:** Riverside investments cannot be considered in isolation as they constitute not only part of city structure and its waterside "façade" but also an element of linear or network structures of ecological corridors and hydrological systems. It is essential that integrated planning methods be introduced that consider investment impact on the quality of natural and cultural environment, waterways activation, attractiveness of tourist tracks as well as the risk of flooding. Revitalisation is an ongoing process. Local planning must be based on in-depth analyses of the main functions and content of waterfront landscapes and must also be flexible enough to permit adaptation to vital changes.
- **Water cleanness:** High quality of surface water is a necessary condition for the sustainable revitalisation of riverside areas. Elimination of pollution sources in the basin area must be pursued along with increasing the self-cleaning capacity of water bodies.
- **River basin preconditions:** Re-naturalisation actions require prior diagnosis of river basin conditions, adjusting the goals to capacity and needs of the particular drainage area to subsequently proceed to re-naturalise flood plains. Re-naturalisation of the river-beds themselves should be the final stage of actions in order to prevent the destruction of the transformed areas.
- **Adjusting solutions to spatial opportunities:** Revitalisation priorities of waterside areas depend on the specifics of place in the functional-spatial urban structure. Socio-cultural and aesthetic aspects will have a high priority in compact downtown development, while bigger parks and municipal forests provide an opportunity for natural revitalisation and creation of water biotopes. In all areas, though, it is necessary to use every opportunity to increase waterside accessibility and attractiveness as well as to raise retention capacity and biodiversity.
- **City's image creation:** Waterfronts are crucial for defining the city's image, with respect to tourism and recreation development as well as for creating a space for social integration and cultural events. These insights should be used for appropriate promotion of revitalisation actions within river valleys.
- **Accessibility to the public:** River-banks should be physically and visually accessible to citizens and tourists of all ages and walks of life. High quality public spaces should be provided along with accessibility for the disabled and continuity of riverside recreational routes.
- **Priority functions:** Urban waterside areas should be used for special functions which require access to water such as water transport, sport, recreation, entertainment, culture and education while preserving the ecological values of river valleys.
- **Waterside identity:** The common heritage of a town and the river as well as events, architectural structures and natural resources should determine the character and meaning of waterside landscapes. Relics of an industrial past constitute an integral element of the identity of riverside areas, as well.
- **Staging and managing the revitalisation process and monitoring results:** Revitalisation of urban waterfronts is a long-lasting, complex process including a variety of aspects (economic, social, environmental and cultural), which should be organised in several stages, so that consecutive stages of town planning not only require investment but simultaneously generate financial, social, cultural and ecological benefits resulting from the regeneration of subsequent valley parts and activation of waterside public spaces. It is essential to apply the project management methodology as well as to monitor the efficiency of specific tasks in order to gain the acceptance of society and decision makers. The local administration should monitor the realisation of strategic goals, regardless of economic cycles and short-term interests.
- **Social approval:** Acceptance of the transformations is a precondition for participation of residents in the revitalisation process and preservation of its results. This can be achieved by patient cooperation with the local community and providing complete information about investment intentions and accommodating social needs and expectations. It is crucial to constantly raise the ecological awareness of society with attractive educational programs that target different social groups (not only children and youth).

- **Public-private partnership:** The highest level of social acceptance is reached when the cost of transformation and preservation of the revitalised areas is shared. This aim can be achieved through public private partnerships. Local authorities must guarantee a high quality project, territorial development as well as social sustainability. Private capital involvement ensures economic profitability and facilitates the pace of the area's development. Private developers should be obligated to share the cost of the modernisation of waterside public spaces. The coordinators of the revitalisation process should guarantee long-term benefits in economic, social and ecological aspects.
- **Trans-regional profile of surface waters:** The boundaries of drainage areas do not coincide with administrative borders. Thus, the effective revitalisation of riverside areas requires trans-regional and even international cooperation. It is crucial that knowledge and experience on trans-national levels be transferred between entities involved in the processes of revitalisation of urban river spaces at different levels and stages of planning and realisation.

## Summary

The selection of best practice examples of urban river space revitalisation in southern Poland was based on analysis by the CMI REURIS team of literature and planning documents from twenty-one projects. Eleven projects were then selected for in-depth evaluation with regard to both the planning and implementation process and the results of the projects implemented.

In northern Poland the selection methodology was developed by Dr inż. arch. Anna Januchta-Szostak from Faculty of Architecture, Poznan University of Technology. The methodology comprised four stages:

- preliminary recognition and selection, based on literature, planning documents and expert interviews,
- project classification,
- data collection and verification, and
- evaluation of good practice examples.

The research area included forty-three cities in northern Poland. Finally, in all of Poland thirty-six projects were selected and classified into five categories.

Special questionnaires were employed to collect details about the single projects. The questionnaires for northern and southern Poland were different, but they enabled the REURIS team to select the projects which are effective and handle complex revitalisation processes that deal with ecological, spatial, social and economic issues. During the analysis of the projects it became apparent that in Poland most of the projects are in preparation. The analysis of revitalisation projects revealed the most common problems and their solutions in Poland.

The most difficult issues are:

- lack of experience and methodology about integral urban-natural revitalisation projects,
- lack of legislative mechanisms, public-private partnership models and local financial mechanisms that have been verified under Polish conditions,
- low level of consciousness in society for these issues,
- problems with land availability,
- lack of databases about catchment areas and incompatible statistical data on different spheres of city life.

Key factors for success are:

- implementation of integrated planning methods,
- financing from city budgets, state and European funds,
- introduction of educational programmes and public consultation,
- good cooperation of the realisation and the project design teams,
- innovation in planning and design, and
- individual initiative and bottom-up approaches.

## 1.2.1.2 Best practices in the Czech Republic

### Rivers and streams in the Czech Republic

As everywhere around the world, riverside areas in cities and towns in the Czech Republic have been influenced by a long tradition of water management practices. Rivers have been segregated from urban structures and extensively modified. Streams of all scales have been mostly influenced by older practices of the river management. They have been narrowed, stabilised, and strictly technical modes of flood protection have been prioritised. Small streams, abandoned meanders and mill races have been also used as drop sites for municipal sewage.

However, noticeable progress in the perception of urban rivers and in water management practice has been made in the last fifteen to twenty years. While older practices remain prevalent, there are some good examples of stream restoration within urban areas which illustrate a shift towards recognising that rivers are a part of the urban landscape.



*River Morava near Olomouc (© Unie pro řeku Moravu).*

### Approach

In order to gain appropriate data and information, the team investigating the situation in the Czech Republic followed a more statistical approach. At first, topical conditions of revitalised watercourses in urban areas of the Czech Republic were thoroughly mapped. To this end and with a view towards obtaining relevant information, the following institutions were asked for their inputs:

- water basin management companies,
- the Administration of the Agricultural Water Management,
- the Agency for Landscape Management and Conservation,
- administrations of protected landscape areas and national parks,
- regional authorities and municipal authorities of the Capital of Prague,
- all villages with an extended sphere of authority and towns with more than 5,000 inhabitants,
- the State Environmental Foundation (including every single regional site),
- design and developing companies focused on water management and restoration of watercourses, and
- NGOs focused on environmental and landscape conservation.

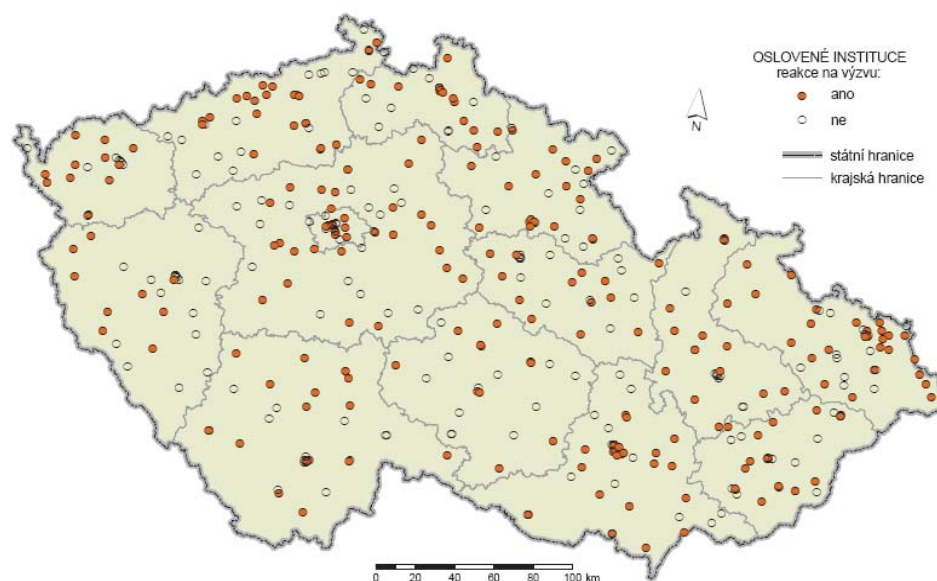


Figure 1.2-4: Map of distribution - institutions contacted and their answers (data source: ArcCR 500).

Notes:

- total of 419 institutions addressed,
- total feedback of 54%,
- red points: positive feedback, and
- white points: no feedback.

The institutions were contacted both by sending an information letter with a questionnaire and by email. They were asked for information about the type and status of action, location and watercourse, the investor, the time of implementation and for a short project description.

Only slightly more than half of the respondents sent a positive feedback and signalled their willingness to collaborate. This level of response was the main obstacle for obtaining quantitative criteria for project assessment. Nevertheless, thirty-five projects were chosen for further evaluation. This sample can serve as a unique source of information about good restoration practice in urban areas in the Czech Republic.

During the second step, detailed information about the thirty-five projects was collected. This data was again requested via questionnaires. Whenever necessary, the respective persons or institutions were contacted personally (meetings, emails or phone calls).

The thirty-five projects were evaluated according to the following criteria:

- location in an urban area,
- application of revitalisation principles (projects with strictly technical flood protection and riverbed measures were omitted), and
- multifunctional orientation of the project (on ecological, social and spatial aspects, flood protection, etc.)

and divided into two categories:

- category A: implemented or planned complex restoration projects (twenty-three projects), e.g. projects with multifunctional orientation, and
- category B: projects that are limited to some revitalised elements only; the overall character is not noticeably different from the earlier common river restoration practices (twelve projects).

Twelve best practice examples were chosen from category A. These are described in detail in the following.



## Over view of the projects

Table 1.2-4 shows the analysed projects. The twelve projects with a grey background were chosen as best practice examples.

Table 1.2-4: List of revitalisation programmes and semi-natural flood-management arrangements on watercourses in the Czech urban landscape, including some cases of sensitively implemented traditional manage methods applied to watercourses (1.12.2009).

	<b>Section A) complex revitalisations and semi-natural flood-management arrangements on watercourses in urban landscape</b>		<b>Section B) sensitively implemented traditional manage methods with some revitalisation elements</b>
	Havlíčkův Brod: Restoration and flood protection measures on the Cihlářský Stream		Bílovec – Environmentally-friendly flood protection measures on the Bílovka Stream
	Havlíčkův Brod: Stream and its surroundings, measures between Rozkošská and Havlíčkova Streets		Jablunkov - Návsí – Course measurements on the Kostkov Stream
	Chrudim: Restoration of a town water mill race in Chrudim		Kamenický Šenov – Reconstruction of the Šenovský Stream
	Jičín: A polder under the Šibeňák Pond on the Valdický Stream		Karviná – Course measures on the Rájecký Stream
	Jičín: Measures with respect to the functional use of the Cidlina basin in the urban area of Jičín		Nový Jičín – Riverbed measures on the Zrzávka Stream in Bludovice
	Karlovy Vary: A meander of the Ohře River, a bio-centre		Polička – Flood protection measures for the Bílý Stream basin
	Litomyšl: Flood protection and embankment measures in the Komenského square		Praha – Restoration of the Dolejský Stream
	Loštice: The Třebůvka Stream, Moravičany – the stream embankment		Praha – Restoration of the Košíkovský Stream
	Olomouc: Restoration of the Morava River and flood protection of the town Olomouc		Rychvald – Stream measures on the lower section of the Gurňák
	Opava: Town parks – a town water race and a deposit basin		Studénka – Course measures on the Butovický Stream
	Opava: Bank recovery along the Opava River		Ústěck – Nature recreational zone along the Červený Stream
	Planá: Restoration of the Plánský Stream basin		Úvaly – Restoration of watercourses and ponds including flood protection measures
	Praha: Recovery of the Čimický Stream		
	Praha: The Botič Stream restoration in Kozinovo Square		
	Praha: The Botič Stream restoration near the Fidlovačka		
	Praha: Restoration of the Krůtecký Stream		
	Praha: Restoration of the Litovecko-Šárecký Stream		
	Praha: „Čihadla” Polder restoration		
	Praha: Restoration of the Cibulka Stream		
	Přeštice: Riverbed and river surroundings measures on the Úhlava River		
	Třinec: Forest park revitalisation in Třinec		
	Uherský Brod: Restoration of the Vínohradský Stream		
	Veselí nad Moravou: Restoration of the cutoff arm “Hrnčířské louky”		

Table 1.2-5: Twelve best practice examples from the Czech Republic

No.	Name	Location (city)	Investor	Status, year of completion	Main goal(s)
2	Revitalisation of a course section of the nameless right tributary of the Sázava River between Rozkošská and Havlíčkova streets	Havlíčkův Brod town	Town Authority of Havlíčkův Brod	2009	ecological social economic
3	Restoration of the historical water flume (a mill race) in the centre of Chrudim	Chrudim	Town Authority of Chrudim	2009	ecological social
4	Flood protection of part of Jičín and restoration of the originally channelised Valdický Stream (polder under the Šibeňák Pond)	Jičín	Town Authority of Jičín	2007	ecological social economic
5	Measures in riverbeds of the Cidlina and the Valdický courses with their floodplains in the urban area	Jičín	Town Authority of Jičín	Not realised (start planned for 2013)	ecological social economic
6	Revitalisation of a section of the meandering Ohře River and its adjacent area in Karlovy Vary (bio-centre)	Karlovy Vary	Corporate Town Authority of Karlovy Vary	Not realised (start planned for 2010)	ecological social economic
7	Flood protection measures on the Loučná River in its section situated near a housing estate in Komenského Square	Litomyšl	Town Authority of Litomyšl	2002	ecological social economic
9	Restoration and flood protection on the Morava River in Olomouc	Olomouc	Morava River Basin Administrator, Municipality of Olomouc Town	Not realised (start planned for 2011)	ecological social economic
14	Restoration of the Botič Stream in Kozínovo Square	Prague	Capital City Authority of Prague	2009	ecological social economic
15	Restoration of a 170 m long section of the Botič in the centre of Prague near the Fidlovačka	Prague	Capital City Authority of Prague	2007	ecological social economic
16	Restoration of the 260 m long section of the Krůtecký Stream situated at the area of the nature park Šárka – Lysolaje	Prague	Capital City Authority of Prague	2007	ecological social
22	Restoration of the 270 metre-long section of Vinohradský Stream at the area of a housing estate pod Vinohrady	Uherský Brod	Town Authority of Uherský brod	2009	ecological social
23	Restoration of a cutoff stream branch of the Morava River (“Hrnčířské louky”)	Veselí nad Moravou	Morava River Basin Administrator	2007	ecological social

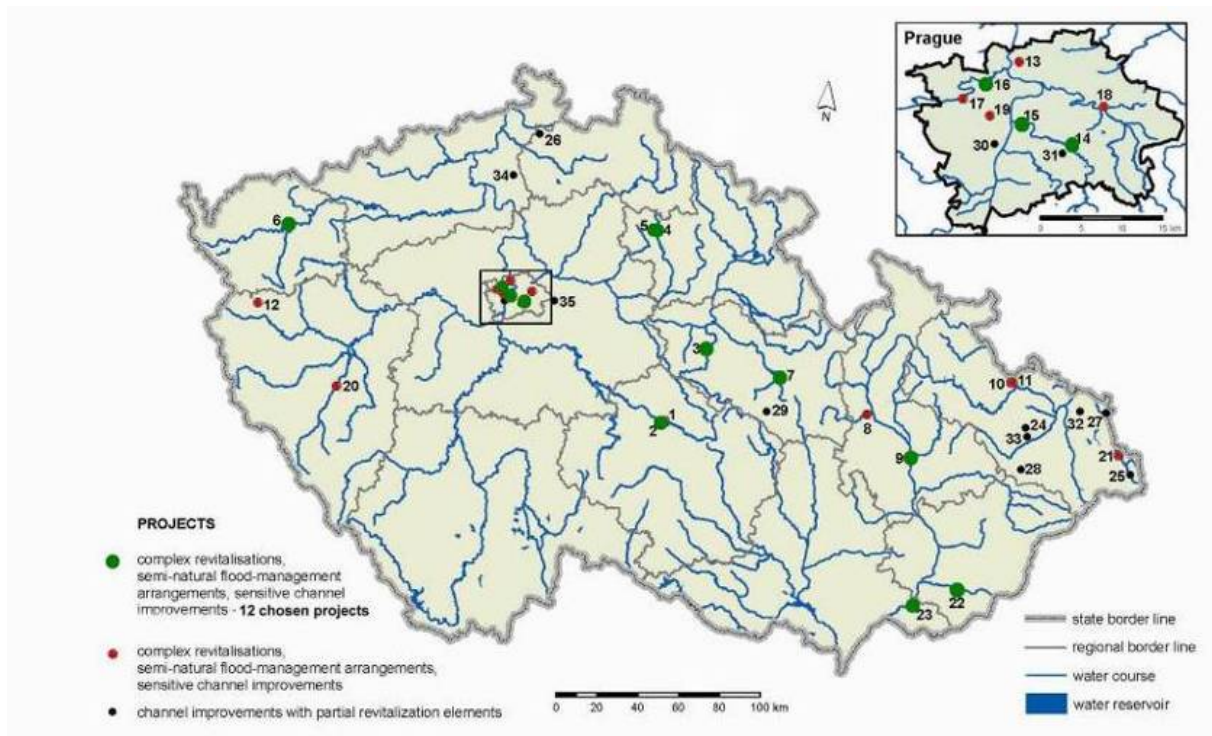


Figure 1.2-5: Location of the 35 projects analysed within the Czech Republic (data source: ArcCR 500, DIBAVOD).

## **Best practice examples in the Czech Republic**

## Project 2 – Tributary of the Sázava River: revitalisation of a course section between Rozkošská and Havlíčkova streets

**Location:** Havlíčkův Brod / Czech Republic

**Investor/executing organisation:** Town Authority of Havlíčkův Brod / EVOS-HYDRO, s.r.o. (limited comp.)

**Timeline/Status:** implementation from March to October 2009

**Extent:** 200 m long course section



*Situation (©Unie pro řeku Moravu)*

**Short description:** The nameless right tributary of the Sázava River between Rozkošská and Havlíčkova streets in Havlíčkův Brod was a channelised riverbed that had posed a risk during high waters and caused flooding of the adjacent buildings. In addition the stream surroundings were poorly maintained and offered no opportunities for use by local residents. The original construction was demolished (channelisation) and the stream capacity was increased. In addition new lighting systems were installed, a pedestrian bridge built, invasive plants removed and perennial plants and shrubs planted and lawns seeded.

**Basic idea:** Enhancing the value of the stream in all its possible aspects is the basic idea of the project.

### Aims of the project

- **ecological:** Two main ecological aims were the implementation of an environmentally-friendly mode of stream regulation that respects possible animal migration and an increase in river bottom roughness.
- **economic:** From the economic point of view the main aims were conservation and flood protection measures that put reduced the risk of the incidence of flood situations. This could mean future savings thanks to reduced costs for repairing flood damage).
- **social:** The social aim was to create a new recreational area for people from the neighbourhood and also better conditions for walking, especially for clients of the nearby hospital.

- **planning/urban development:** The urban development aim was to establish a new area offered opportunities for direct contact with flowing water and which was designed to be environmentally-friendly.

**Main goal:** The main goal was to provide sufficient water retention capacity and better flood protection for the neighbourhood as well as increasing the storage capacity in the region and strengthening the area's biodiversity.

**Initiative / „the driving force“:** The main idea came from the project investor (the town Havlíčkův Brod) and the designer.

**The planning and implementation process:** The project realisation started in March 2009 and was completed in October of the same year.

**Maintenance:** The site is maintained by the Municipality of Havlíčkův Brod.

**Public participation:** The proposal for the project intention was published in a local newspaper, *Havlíčkovobrodské listy*. Information on the project realisation is available on the town websites. The ceremonial opening following completion of the renovation took place on 16 July 2009 among the participants were the municipal authorities, representatives of the other authorities involved and organisations and the general town public, as well.



**Financing:** The total project expenses were 7,231,910 CZK (about 290,000 Euro). The project was partly co-financed from the Operational Environmental Programme – the priority pivot: 6 – Improvement of the nature and environment. From this source came 3,986,782 CZK (about 160,000 Euro).

**Analysis:** The pursued goals were fully achieved and correspond with both the needs of the public and nature protection needs.

**Key factors for success:** The key factor for successful project realisation was meeting and harmonising the needs of the general public in the town and nature protection needs. No obstacles occurred during the project.



*Situation before the revitalisation*



*June 2009*



*July 2009*

*(Photos: ©Municipality of Havlíčkův Brod)*



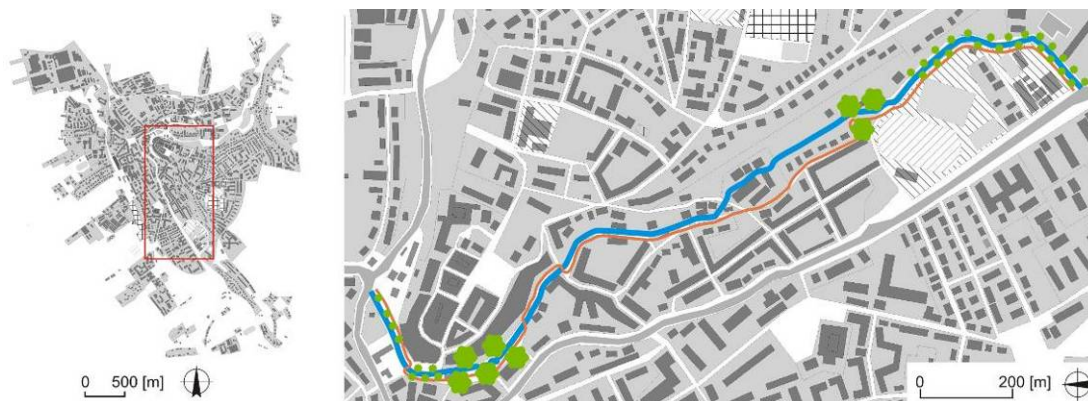
## Project 3– Restoration of the historical water flume (a mill-race) in the centre of Chrudim

**Location:** Chrudim / Czech Republic

**Investor/executing organisation:** Town Authority of Chrudim / different companies

**Timeline/Status:** 1995-2009

**Extent:** A section of about 1,700 metres



*Situation and plan (©: Unie pro řeku Moravu)*

**Short description:** The project focused on restoration of the listed water mill race in the historical centre of the town of Chrudim. This is the first complex mill race restoration under the limited space conditions of an urban area on the territory of the Czech Republic.



*Situation before the revitalisation (©Šindlar, s.r.o.)*

The respective water section was unmaintained and clogged by both clay and other heterogeneous deposits. This functionless mill race diminished the appearance of the historical centre of Chrudim.

The measures implemented were inspired by natural river courses (a meandering river with fine gravel and cutoff river arms, sections with boulders or sharp stones from rock gorges). The capacity of the riverbed was proposed to yield an average discharge of 0.18 m<sup>3</sup>/sec. The common functional discharge is 0.10 m<sup>3</sup>/sec). As materials wood, gravel and aggregates were used. Specifications for the vegetation planted were predetermined after consulting experts.

**Basic idea:** The basic idea of the project was to realise general improvement of the water mill race, improvement of the water quality and integration of the mill race into the town structure.

### Aims of the project

- **ecological:** The ecological aims were to create new habitats, restore the section by removing obstacles for water animals (e.g. fish passes), increasing the level of the natural purification capacity as well as improving the quality of water.
- **social:** The social aim was to provide a new comfortable and pleasant area near the water suitable for leisure activities for adults and children.
- **planning/urban development:** The urban development aim was to increase the aesthetic value of the town.

**Main goal:** The main goal of the project was focused on ecological and social impacts.



*Situation after revitalisation (©Šindlar, s.r.o.)*



**Initiative / “the driving force”:** The initiator of the project was the Town Authority of Chrudim and the main ideas for realisation came from the designer company – Šindlar, s.r.o. The project was also inspired by and discussed with experts from the Netherlands (from Chrudim’s partner town Ede).

**The planning and implementation process:** The plan to restore the mill race was proposed by the municipal government of Chrudim and authorities supported the project throughout its planning, promoting and realisation. The mill race itself is in the town’s possession, as are most of the neighbourhood lands.

The project conformed to the Master plan and required a town planning decision and a building license. It was also necessary to obtain permission from the preservation authority.

Project implementation lasted from 1995 to 2009 and was divided into six periods.

**Public participation:** Because the project began in the early 1990s, the general public was not involved in project planning, since at the time public participation was not yet a common practise in the Czech Republic.

**Financing:** The cost of implementing the project came to 14,000,000 CZK (about 560,000 Euro). The first three periods were entirely financed by the municipal government of Chrudim.

The following periods were supported by a financial grant from the State Foundation of the Czech Ministry of the Environment (SFŽP). Total annual maintenance expenses come to 100,000 CZK (about 4,000 Euro).

**Analysis:** The main part of the mill race has already been revitalised. There is a section remaining (surrounded by private gardens) in Václavská and Koželužská Streets that has not yet been restored.

**Most difficult obstacles:** Among the main obstacles were a lack of money, instabile conditions in the town, the fact that the mill race is listed as a historical monument, the technical structure, insufficient flow for almost the whole year, and a high level of sedimentation near bassins.

**Key factors for success:** Key factors for success were the full support of the town authorities, the fact that the mill race is town property as are most of the neighbouring lands. Other important facts were easy access to the mill race by town roads and the possibility of controlling water levels.



*Situation after revitalisation (©Šindlar, s.r.o.)*



*Situation after revitalisation (©Šindlar, s.r.o.)*

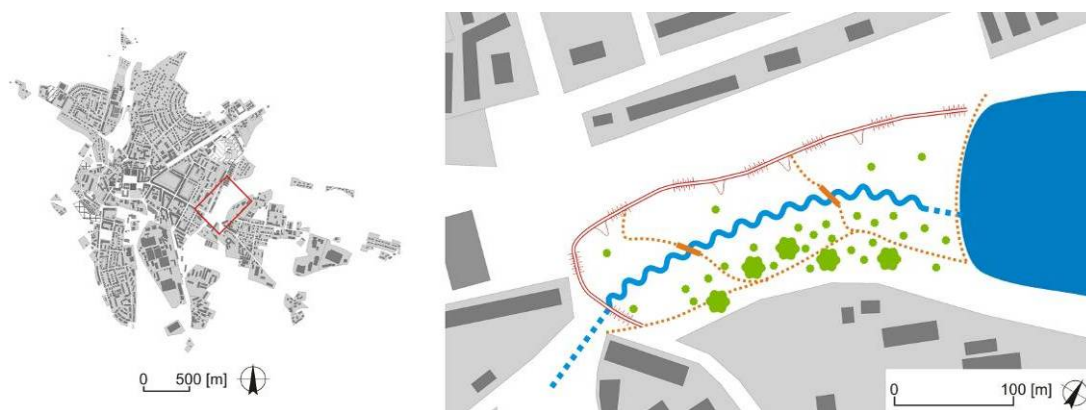
## Project 4 – Valdický Stream: Flood protection for part of the town Jičín and restoration of the Valdický Stream - polder under the Šibeňák Pond

**Location:** Jičín / Czech Republic

**Investor/executing organisation:** Town Authority of Jičín / Zvánovec, a.s. (private company)

**Timeline/Status:** November 2004 to January 2007

**Extent:** 275 m section of the Valdický Stream



*Situation and plan (©Unie pro řeku Moravu)*

**Short description:** The Valdický stream was channelised from the Šibeňák pond dam. A new dam was built under the pond to create a flood control basin. The dam length is 270 m, width in the dam crest is 3,5 m; slope inclination 1:3 (water side) and 1:2 (air side); the total dam capacity is 1700 m<sup>3</sup>. This previously channelised 275 m section of Valdický Stream was restored and a new meandering section was modelled. A bed for the water course with a width of 6 m was formed from river pebbles and additional gravel. Dead wood was also used for the restoration measures in this stream section. A proposed discharge / flow rate has been estimated at 0.052 m<sup>3</sup>/sec.

**Basic idea:** The basic goal of the project was to achieve better flood protection for part of Jičín and to increase the water retention capacity of the landscape.

### Aims of the project

- **ecological:** The ecological aims focused on revitalising a meandering stream section with a riverbed that offer improved conditions for natural processes, thus enhancing these habitats and their biodiversity.
- **economic:** The main economic aim consisted in providing better flood protection for the town.
- **social:** Both town residents and cyclists benefited from new walking and cycling paths. A new cycling route leads along the Šibeňák Pond dam.
- **planning/urban development:** The town gained a new town park.

**Main goal:** The main goal of the project led to better flood protection for Jičín and to an increase in the water retention capacity of the adjacent landscape.

**Initiative / “the driving force”:** The idea for the project came from the authorities in Jičín. Then the initiative was taken by the design and developing company Šindlar, s.r.o., which proposed project measures. The project was implemented by the executive company Zvánovec, a.s.

**The planning and implementation process:** The project was initiated by the authorities in Jičín. The key factor for successful project implementation were financial grants from the Ministry of the Environment and the EU. The project conformed to the Master plan and required a town planning decision and a building license. Implementation lasted from November 2004 to January 2007.

**Public participation:** The general public and stakeholders were not involved into any phase of project planning. All decisions on investments were made by the town authorities.



*Situation before revitalisation (©Municipality of Jičín)*

**Financing:** The total project expenses come to 5,975,000 CZK (about 239,000 Euro). Funds were granted by the Czech Ministry of the Environment (the Operational Environmental Programme - Infrastructure for Environment; SFŽP) and from the EU: 80% of the project expenses including VAT from the EU, 10% from SFŽP, 10% the Municipality of Jičín, 50% from SFŽP for the planning documentation.



*Situation after revitalisation (©Municipality of Jičín)*

**Analysis:** The project intention was fully implemented and all of the goals pursued were achieved.

**The most difficult obstacles:** The main obstacle during realisation was finding a site where the sediments excavated during restoration could be deposited.

**Key factors for success:** The key factor for success was allocation of financial grants from the Czech Ministry of the Environment and the EU.



*Situation after revitalisation (©Municipality of Jičín)*



## Project 5 – Cidlina and Valdický Stream: Measures in the riverbeds of the Cidlina and the Valdický Stream with their floodplains in the urban area

**Location:** Jičín / Czech Republic

**Investor/executing organisation:** Town Authority of Jičín

**Timeline/Status:** not yet realised (proposed year of realisation – 2013)

**Extent:** section of 1.580 km of the Cidlina Stream / section of 200 m of the Valdický Stream



*Situation and plan (©Unie pro řeku Moravu)*

**Short description:** This project will be implemented in the urban area of Jičín, on the River Cidlina and the Valtický Stream. In the past, the riverbeds of these watercourses were straightened and their capacity enlarged. The main measure planned is restoration of the natural conditions of the watercourses, (meandering riverbed with ponds and a dynamic floodplain) with special stress on flood protection and improvement in terms of natural, aesthetic and recreational criteria.



*State of Cidlina River before revitalisation (© Šindlar, s.r.o)*

**Basic idea:** The main idea of the project is to improve flood protection parameters.

### Aims of the project

- **ecological:** the neoformation of the meandering sections of the watercourses with ponds and fords to provide new breeding microhabitats for amphibians; restoration of the other habitats suitable for colonisation by plants; restoration of the natural purification processes in the water ecosystem; increasing the biodiversity of the area
- **economic:** decreasing the water level on the respective sections of courses during floods, thus saving funds needed for repairing flood damage and restoring the area after flooding.
- **social:** increasing the recreational potential of the whole area along this section of the Cidlina River and improving the aesthetic value of the area
- **spatial:** creating a unique natural element within the town's urban area

**Main goal:** Together with better flood protection, the initial measures should greatly improve the ecological status of the watercourse and its floodplain, thus creating valuable new opportunities for recreational use by the town citizens.

**Initiative / “the driving force”:** The main ideas came from the town authorities and the project designer, Šindlar, s.r.o. (limited comp.). The project is supported by the town authorities.

**The planning and implementation process:** This project has not been implemented yet. Project realisation is proposed for 2013. The basic project was designed in 2006. Building documentation was started in 2008 and has been prepared for the area management. The project conforms to the Master plan.

**Public participation:** The public has not been involved yet

**Key factors for success:** Key factors for project realisation are support from the town authorities and approval of the proposal for realisation.



*State of Cidlina River before revitalisation (© Šindlar, s.r.o.)*

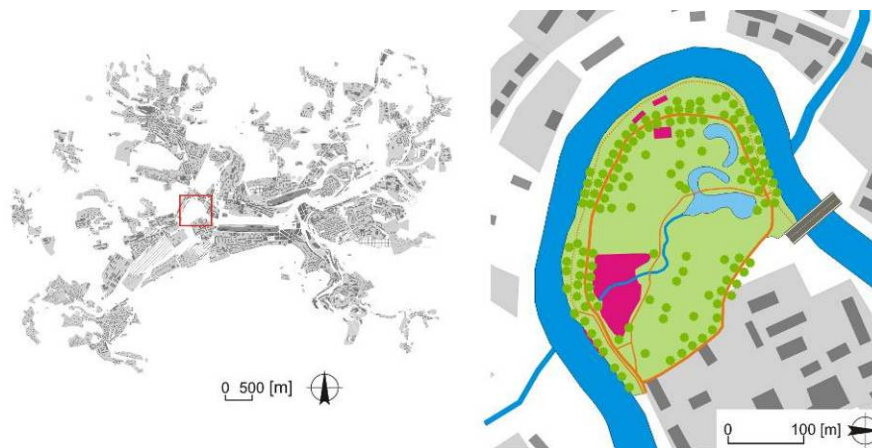
## Project 6 – Ohře River: Revitalisation of a section of the meandering Ohře River and its adjacent area in Karlovy Vary (bio-centre)

**Location:** Karlovy Vary / Czech Republic

**Investor/executing organisation:** Corporate Town Authority of Karlovy Vary

**Timeline/Status:** implementation started in 2010, in progress

**Extent:** A section of the meandering Ohře River ( 1 km) and adjacent areas in the town of Karlovy Vary



*Situation and plan (©Unie pro řeku Moravu)*

**Short description:** The area in question in this project has not been used agriculturally recently, so that the land is covered by ruderal phytocoenoses. Moreover, part of the area was used as a refuse dump. This area is defined as a regional bio-centre in the Master plan of Karlovy Vary (part of the ecological network of the landscape – centre of biotic diversity).

The project consists in the following proposed measures:

- preparation work (modelling of the hill, removal of the refuse, continuous maintenance of the riparian vegetation without limiting the floodplain's water-retention capacity)
- realisation of water elements (a water basin supplied by a water flume and wetland habitats fed via infiltration)
- realisation of recreational elements (e.g. children's playgrounds, a cycling route).

**Basic idea:** The main idea of the project is to develop the nature potential of a river floodplain and create a bio-centre.

### Aims of the project

- **ecological:** The main ecological aim is to increase biodiversity thanks to elimination of invasive species (mainly knotweed) and ruderal biocoenoses, to sowing suitable grass-seed mixtures and to complement the biotope by adding water elements with large littoral zones.
- **economic:** The main economic goal is to rectify flood water flows.

- **social:** Town residents will gain a new recreational centre for their free time activities – trails for walkers, cyclists and in-line skaters. A nature trail is also planned.
- **planning/urban development:** The newly opened area will be integrated into the urban structure of the town. Brownfields (previously covered by gardens and greenhouses) will be substituted by natural sites with supplementary elements.

**Main goal:** The main goal of the intended project is to redevelop the natural potential of a river floodplain and restore the bio-centre.

**Initiative / “the driving force”:** The main initiative was taken by the company, Správa lázeňských parků, the allowance organisation of Karlovy Vary Town. Because of the attractiveness of the area there has been serious concern that the project might be substituted in the Master plan by plans from other stakeholders or investors, so it was necessary to negotiate approval very quickly. Thanks to representative in the town authorities who swiftly recognised the project's intention, the project was successfully expedited and finally approved.





*Before revitalisation – 2006 (©Atelier Fontes)*

**The planning and implementation process:** The design and developing companies were Ekologická dílna Brno and Atelier Fontes, s.r.o. Work on the

design has been completed and a building licence has been issued. Realisation of the project was begun in 2010 and is scheduled for completion in 2011.

**Maintenance:** Annual maintenance costs for water pumps used in the planned water elements will come to 10, 000 CZK.

**Public participation:** Plans for the project have been pursued with no public participation and almost no information to the public. The main reason for this course of action is concern that the project plans could become threatened if investors were able to realise building plans on the site.

**Financing:** Total estimated expenses come to approx. 25,900,000 CZK (about 1,036,000 Euro). Of this total amount, terrain formations come to approx. 3,600,000 CZK (about 144,000 Euro) and water elements to approx. 7,000,000 CZK (about 280,000 Euro).



*Visualisation of the future state (©Ekologická dílna Brno)*



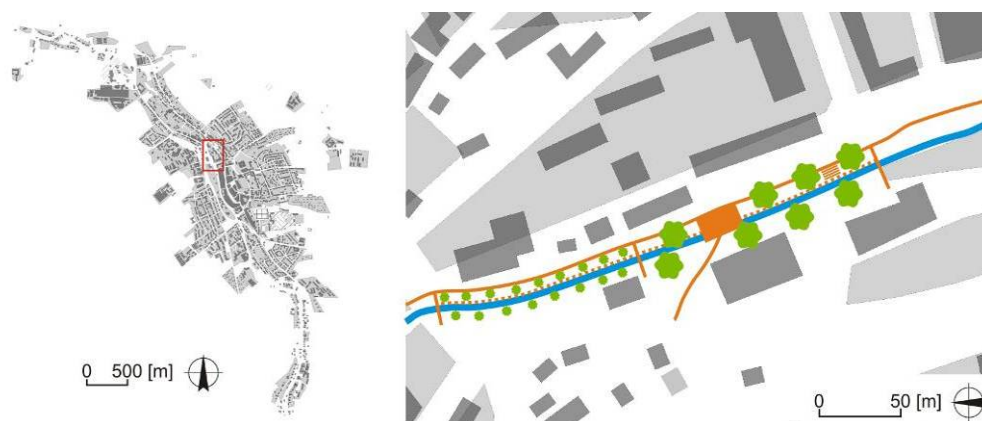
## Project 7 – Loučná River: Flood protection measures on the Loučná River in its section situated near a housing estate in Komenského Square

**Location:** Litomyšl / Czech Republic

**Investor/executing organisation:** Town Authority of Litomyšl / VCES Hradec Králové, a.s. (private company)

**Timeline/Status:** October 2001 to May 2002

**Extent:** about 250 m section of the Loučná River



*Situation and plan (©Unie pro řeku Moravu)*

**Short description:** The housing estate was an isolated part of the town with insufficient flood protection. The locality was not sufficiently connected to the Loučná River and the part of the town on its left bank. The river banks were not maintained and a bridge was needed in this section.

The following measures were implemented: the river course was regulated in an ecologically-friendly way by constructing a gabion embankment on the right bank and a gradual longitudinal profile. Other elements realised were a riverside path on the right bank, a new bridge for walkers, new access to the river using wooden steps, a gabion-strengthened path along the water, two pavements on the left bank leading to Smetana's House and the Music Club Kotelna, repair of the supporting walls on the left side of the river, vegetation maintenance and planting of new vegetation.

**Basic idea:** The project was initiated in order to integrate the estate housing area into the town and improve flood protection for the area.

### Aims of the project

- **ecological:** maintaining the habitat of the common trout by using the gradual longitudinal profile; increasing the wild duck population; increasing the area's attractiveness for tourists and local residents.
- **economic:** providing functional flood protection, providing opportunities for businesses (open-air restaurants and cafés)

- **social:** providing easy access to the river, opportunities for town residents to “discover” the river, walk, rest at the bridge and also for children to play.
- **planning/urban development:** connecting the neighbourhood, the rest of the town and the river not only functionally but also in an architecturally sensitive way

**Main goal:** The main project goal was to integrate the estate housing area into the town and improve its flood protection.

**Initiative / “the driving force”:** The main idea was developed by the town authorities who are fully competent for planning and implementation of the project. Specific restoration measures were proposed by the designer, Ing. Arch. Josef Pleskot; the executive project company was Vces Hradec Králové, a.s (private company)..

**The planning and implementation process:** The project was implemented between October 2001 and May 2002 and was divided into two periods. The first one, called “Restoration of Komenského Square”, focused on improvement of the river conditions and its adjacent embankment riversides; in the second period, road traffic access to the housing estate from the rest of the town was facilitated including new parking spaces (2002-2003).

The town authorities are fully competent for planning and implementation of the project. Project implementation required the approval of the river manager. The respective lands were owned partly by the town and partly by Povodí Labe, s.p.( a state company) property.

The project conformed to the Master plan and required a town planning decision and a building license.

**Public participation:** Public presentations were organised where the project plans were discussed with housing estate residents and other institutions – Fishing Association, ČSOP (the Union of the Czech Conservationists).

**Financing:** The total project expenses for the first period came to 21,261,000 CZK (850,500 Euro), 60% of this amount was subsidised by the Programme for Restoration of Concrete Housing Estates.

**Analysis:** The investment was implemented according to plan without serious problems and fulfilled all planned goals very well.

**Key factors for success:** Key factors for success are the following: allocation of a grant that covered the greater part of the project expenses; the need to improve flood protection in the town; the project's multifunctional plan; the fact that the town was the sole competent authority for the project; approval by the river manager; ownership of the relevant properties in the hands of the town and the Povodí Labe Company (state company).



*After revitalisation (© Tomáš Souček)*



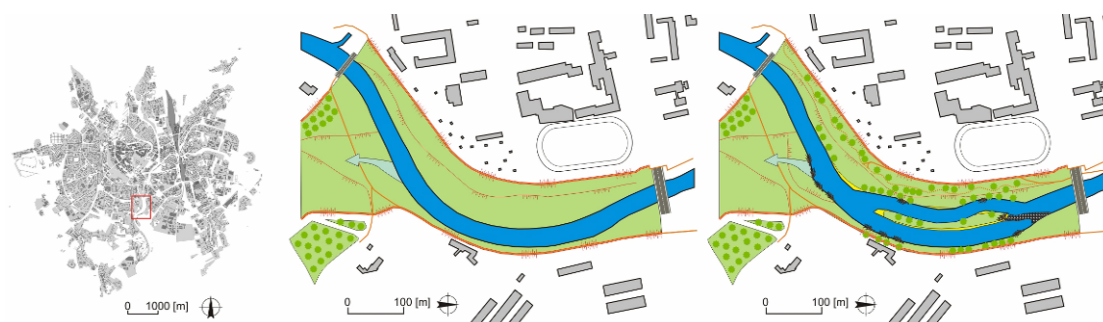
## Project 9 – Morava River: Restoration and flood protection

**Location:** Olomouc / Czech Republic

**Investor/executing organisation:** Povodí Moravy Company (the Morava River Basin Administrator - state company) and Municipality of Olomouc

**Timeline/Status:** proposed year of realisation 2011

**Extent:** section of 700 m



*Situation and plan (©Unie pro řeku Moravu)*

**Short description:** The aim of the project is to realise flood protection measures in Olomouc. The relevant section of the course is today a technically designed riverbed with an insufficient water retention capacity, as demonstrated during the flood in 1997. Project has been prepared on the level of documentation for landuse decision. The proposed measures are the following: bifurcation of the current riverbed and modelling of a low central holm, presence of the convex gravel deposits, alternating pond and ford sections, using river wood for the embankment, dividing a bank ledge on the right side into two elevation steps, planting of suitable bank vegetation, new access to the river for town residents, construction of a new path and strengthening of the dam crest and use as a cycle path.

The project is the second phase of town flood protection construction in Olomouc (river km 232.4 to km 233.1). The project has not been implemented yet, the proposed year of realisation is 2011.

**Basic idea:** The project connects restoration and flood protection measures at one of the backbone water courses in the Czech Republic, the Morava River. The project aims to increase the flood protection, enhance riverbed morphological segmentation, add woody plants to make them part of riverbed vegetation and make alluvial zones of the river accessible for town residents.

### Aims of the project

- **ecological:** creating fish shelters and crayfish habitats by biotechnical woody embankment technology; better supply of suitable sites for river fishes; increase biotope diversity of the riverbed by river bifurcation and, consequently, raising two river arms
- **economic:** better flood protection without endangering the necessary technical measures while implementing river restoration principles
- **social:** increasing the attractiveness for people along the whole alluvial zone; creating places for residents' free time activities, such as walking, cycling, swimming in the river or children's activities
- **planning/urban development:** creating conditions for a gentle transition from a river and its adjacent zones to a park area. The entire area of the proposed project will be green area for Olomouc where residents can use the potential the river offers them and their town.

**Initiative / “the driving force”:** The main idea came from the town authorities and some residents. Proposals for implementation were made and supported by an NGO.



**Public participation:** Proposals for the intended river restoration measures were not supported by officials (who were the investors). The success of the plan is the result of participation of the general public and civil society in the discussion process, who exerted continual pressure on the investors.

**Financing:** The total project expenses are estimated at 350,000,000 CZK (about 14,000,000 Euro), of which the cost of restoration work is estimated at 30,000,000 CZK (about 1,200,000 Euro).

**Key factors for success:** The key factor for success was participation of NGOs in the negotiation and approval processes.



*Current state of Morava River in Olomouc (©Unie pro řeku Moravu)*

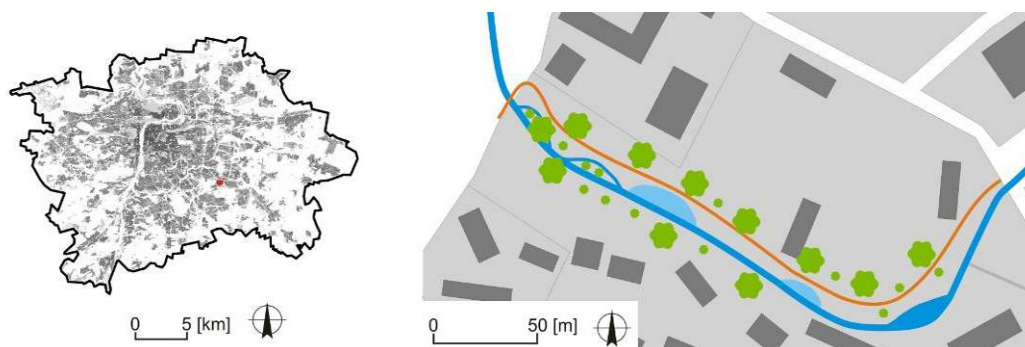


## Project 14 – Botič Stream: Restoration of the Botič Stream in Kozinovo Square

**Location:** Prague / Czech Republic

**Investor/executing organisation:** Capital City Authority of Prague/ Lesy hlavního města Prahy (the river course operator)

**Timeline/Status:** Implementation from April to August 2009



*Situation and plan (©Unie pro řeku Moravu)*

**Short description:** The streambed was damaged after the flood in 2002. A left bank was constructed to a height of 2 m using refuse. This area is settled by non-native ruderal biocoenoses (above all black locust). A historical refuse dump that previously rose up to 9 m from the Botič was cleared up. This led to a left-bank ledge that followed the original profile with its undulating slope with an inclination of 1:2. This measure yielded an increase in the riverbed capacity. The newly modelled slope has created two ponds; the riverbed is bifurcated and stressed parts of the banks are stabilised with large boulders. Older parts of the banks have been seeded with grass and larger stones placed next to banks provide suitable hiding places for animals.



*After revitalization – 2009 (©Jiří Karnecki)*

**Basic idea:** The basic idea of the project consists of two parts - increasing flood protection and restoration of the riverbed and its surroundings so that natural processes are renewed and residents can make use of the area for various activities. This project is part of the projected global restoration of the Botič Stream.

### Aims of the project

- **ecological:** Project implementation was supposed to improve ecological conditions in the riverbed and its surroundings, to establish new habitats for water animals and to clear up the refuse dump.
- **economic:** The project should yield better flood protection by increasing riverbed capacity.
- **social:** The project was supposed to improve protection of property for residents and to provide a new natural space for residents' free time activities and for relaxing in the build-up area.
- **planning/urban development:** The urban development aim was to increase the aesthetic value of the site.

**Initiative / “the driving force”:** The main initiative was taken by the City of Prague and its representatives. The main project idea was promoted by the city authorities and was supported by the councillor for environmental affairs.

**The planning and implementation process:** The project was suggested by the Prague city authorities as a part of the planned global restoration of the Botič Stream. Specific measures were the responsibility of the design and developing company – Aquatest, a.s. (private company). The project was implemented by the company Lesy hlavního města Prahy (the river course operator). The project conformed to the Master plan and required a town planning decision and a building license. Implementation lasted from April to August 2009.



*After revitalization – 2009 (©Jiří Karnecki)*

**Public participation:** The city authorities negotiated with the public on a local level (in a suburban area of the city) - that is, with municipal representatives and residents.

**Financing:** The total project expenses come to 4,500,000 CZK (about 180,000 Euro). The project was financed purely from the city budget.

**Analysis:** Because project implementation has been completed only recently, it is not yet possible to evaluate particular impacts, however, it seems that the project aims have been fulfilled.

**The most difficult obstacles:** The main obstacles appeared to be initial misunderstandings about project on the part of the general public, complaints by the public and the owners of nearby plots about the proposed arrangements and high financial costs.



*After revitalization – 2009 (©Jiří Karnecki)*

**Key factors for success:** The main factors for success are the following: The city authority is the river course manager, the team works with the river course operator, Lesy hlavního města Prahy, support for the project by the councillor for environmental affairs and the fact that the city is the owner of most of the urban land involved. Also, flood protection was a top-priority task.

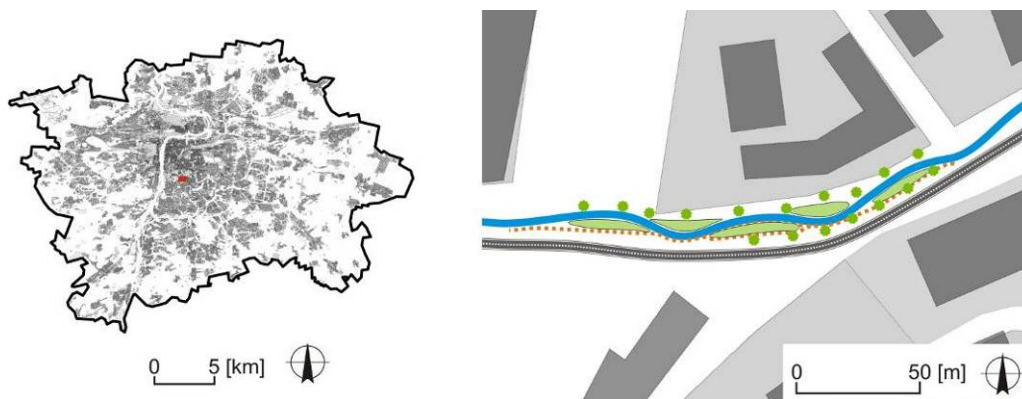
## Project 15 – Botič stream: Restoration of a section of the Botič stream near the Fidlovačka

**Location:** Prague / Czech Republic

**Investor/executing organisation:** Capital City Authority of Prague / Lesy hlavního města Prahy (the river course operator)

**Timeline/Status:** July to December 2007

**Extent:** 170 m section of the Botič Stream



*Situation and plan (©Unie pro řeku Moravu)*

**Short description:** The project deals with a section of the stream characterised by a conventional enrocked riverbed with embankments (bank walls). The section was in disrepair. The project measures included rebuilding the original enrockment and embankment but also restoration of the original space between bank walls.

**Basic idea:** The main priority was to provide flood protection, improve emergency conditions along the embankments and restore the riverbed and consequently obtain new natural space within the city's urban area.

### Aims of the project

- **ecological:** The main ecological aim was to improve the natural conditions in the riverbed and provide new habitats for water animals and wetland plants.
- **economic:** From the economic point of view the main emphasis was on flood protection improvement (restoration after the last floods) and restoration of the original riverbed capacity.
- **social:** Among these aims are creation of a new natural space within the urban area and an educational function (info banners and other info materials).

**Initiative / “the driving force”:** The main idea came from the authorities of the capital city (Prague) and the designer company, Ekotechnik Inženýring, s.r.o. The main project idea was promoted by the city authorities and was supported by the councillor for environmental affairs.

**The planning and implementation process:** The project was implemented by the company Lesy hlavního města Prahy (the river course operator). The realisation started in July 2007 with removal of the original concrete and stone enrockment and cleaning the riverbed. Then a new meandering riverbed was created (five bends, stone floor on a gravel-set bottom), a vegetation embankment and installation of special nets providing protection during high flows. Project realisation was completed in December 2007.

**Public participation:** The city authorities negotiated with the general public on a local level (in a suburban area of the city), that is, with municipal representatives and residents. At the beginning the investor faced misunderstandings about the project among the general public.

**Financing:** The project costs were 7,000,000 CZK (about 280,000 Euro). The project was financed from the city budget only.

**Analysis:** The project was a part of a proposal for the complex restoration of the Botič with the city of Prague. Pursued goals were achieved by the project realisation and the project impacts mostly corresponded to the project aims. The top priority was always flood protection. The section of the watercourse has been successfully incorporated into the existing urban structure during the past two years. The vegetation embankment took root well.



**The most difficult obstacles:** Among the main hindering factors were initial misunderstandings on the part of the general public, expensive and technically complicated rerouting gridirons, complaints by the public and high financial costs.

**Key factors for success:** The main factors for success are the following: The city authority is the river course manager, the team works with the river operator, Lesy hlavního města Prahy, the project was supported by the councillor for environmental affairs and the city most of the most urban land involved.



*Before realisation – 2006 (©Jiří Karnecki)*



*Realisation – 2007 (©Jiří Karnecki)*



*After revitaliaztion – 2008 (©Jiří Karnecki)*





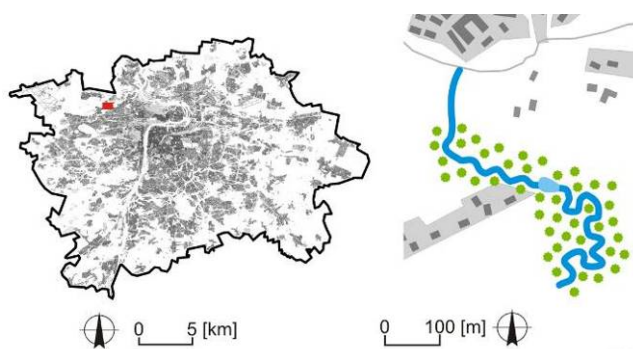
## Project 16 – Krůtecký Stream: Restoration of a section of the Krůtecký Stream

**Location:** Prague / Czech Republic

**Investor/executing organisation:** Capital City Authority of Prague/ Lesy hl.m. Prahy (the river operator)

**Timeline/Status:** implementation from May to July 2007

**Extent:** 260 m section of the Krůtecký Stream.



*Situation and plan (©Unie pro řeku Moravu)*

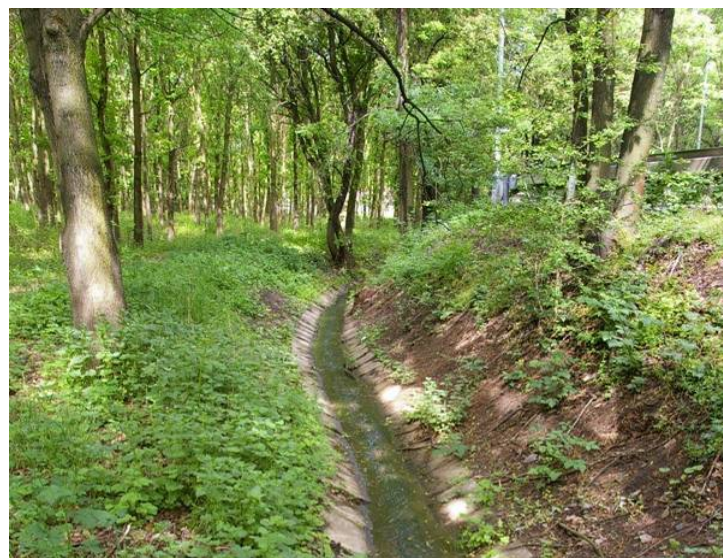
**Short description:** The riverbed section – situated at the nature park Šárka-Lysolaje – was enrocked and straightened in its length of about 260 m. An adjacent meadow was overgrown with ruderal plants and partly covered by refuse. A drain mouth of the channelised part of the stream and drainage of the adjacent road were damaged.

Concrete trough units were removed and the riverbed was slightly waved (meandering); the first part of the riverbed was diverted to the meadow that was behind the drain mouth of the channelised section. This led to creation of a wetland with a pond (the pond area is approx. 90 m<sup>2</sup> and with a maximum depth of 0.5 m). Juvenile maple and ash trees were left on the site and the new stream course was optimised to their location. Stressed parts of the riverbed were strengthened with stone rip-rap. Finally wetland vegetation was planted.

**Basic idea:** The basic idea was to improve the unsatisfactory state of the riverbed and increase its ecological value.

### Aims of the project

- **ecological:** From the ecological point of view, restoration of the riverbed surface was the main ecological aim. Other aims are: increasing the retention capacity within the newly built wetland, natural development of the alluvial floodplain of the meandering riverbed, clearing up the dump sites and creating new wetland habitats.
- **social:** The project generated new educational banners and materials.



*Before revitalisation (May 2007) (©Jiří Karnecki)*

**Initiative / “the driving force”:** The main project idea was developed by the investor – the capital city Prague. The designer, Ing. Jiří Hybášek, then proposed specific restoration measures. The project was promoted by the city authorities.

**The planning and implementation process:** Because the city owns most of the urban land involved, project implementation was facilitated. The city authority is also the river course manager. The investor (the city of Prague) worked in a team with the river operator, Lesy hlavního města Prahy, which was the executive company for project implementation, which began on May 2007 and completed on July 2007.



*During revitalisation (July 2007) (©Jiří Karnecki)*

**Public participation:** The city authorities negotiated with the public on a local level (in a suburban area of the city), that is, with municipal representatives and residents.

**Financing:** The total project expenses come to 650,000 CZK (about 26,000 Euro), which were allocated exclusively from the city budget.

**Analysis:** City representatives have observed project impacts for two years, evaluating these with recognised methods and making efforts to learn from unsatisfactory outcomes. The defined project goals were achieved.

**The most difficult obstacles:** The main obstacles appeared to be initial misunderstandings on the part of the general public.



*During revitalisation (July 2007) (©Jiří Karnecki)*

**Key factors for success:** The main factors for success were the following: The city authority is the river course manager; the team works with the river course operator, Lesy hlavního města Prahy; the project was supported by the councillor for environmental affairs; the city owns most of the urban land involved.



*New pond (©Jiří Karnecki)*



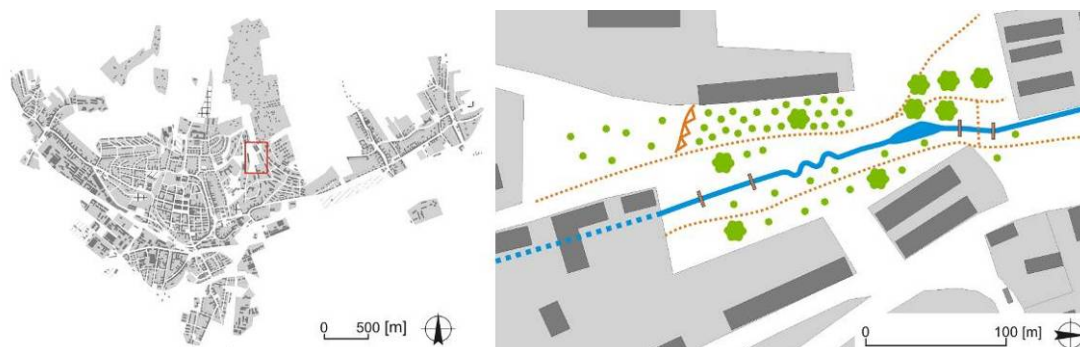
## Project 22 – Vinohradský Stream : Restoration of the Vinohradský Stream in Uherský Brod

**Location:** Uherský Brod / Czech Republic

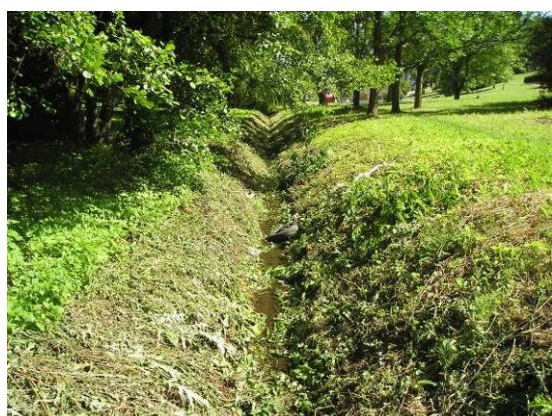
**Investor/executing organisation:** Town Authority of Uherský Brod / Silamo,s.r.o.(limited company), Rumpold UHB,s.r.o. (limited company)

**Timeline/Status:** June 2008 to May 2009

**Extent:** 270 m section of the Vinohradský Stream



*Situation and plan (©Unie pro řeku Moravu)*



*Before revitalisation (2008)(©Municipality of Uherský Brod)*

**Short description:** The project comprised the restoration of 270 m section of the Vinohradský Stream within the housing estate pod Vinohrady in the town of Uherský Brod, which was in an extremely unsatisfactory state. The riverbed was lengthened via meandering, banks were constructed by building a cascade of gradual berms and small ponds that provide better habitats for water animals and offers opportunities for wetland vegetation to develop. Existing vegetation was pruned and cleaned and new vegetation planted (868 pieces of woody plants). These measures were implemented on an area of approx. 6 ha.

**Basic idea:** The basic idea focused on a remedy for unsatisfactory river conditions and restoration of natural river functions.

### Aims of the project

- **ecological:** The project was aimed at improving ecological conditions in the riverbed and its surroundings and creating new habitats for water animals and wetland vegetation.
- **economic:** The project was aimed at increasing the water retention capacity of the adjacent landscape by both restoring the river's original ecological functions and building small ponds.
- **social:** The aim was to establish new natural spaces within the urban environment, make a significant contribution to upgrading the neighbouring housing estate and to increase the park's potential.
- **planning/urban development:** The project's goal was to improve the aesthetic and visual impression of surroundings of the housing estate and the restoration of the architectural elements.

**Initiative / “the driving force”:** The project initiator was the investor - the town authorities in Uherský Brod.

**The planning and implementation process:** The project implementation lasted from June 2008 to May 2009.

**Public participation:** The project was introduced to the general public. A report on the project as a model undertaking was also published in the magazine *Priorita*. Finally, it was introduced at a workshop in Olomouc.

**Financing:** The total project expenses come to 2,673,770 CZK (about 107,000 Euro). Of this amount 2,060 205 CZK (about 82,400 Euro) was granted from funds allocated through the Operational Programme Environment (according to the Area of support 6.4 – Optimisation of the water mode in a landscape and 6.5 – Support for the restoration of the urban areas).



*After revitalisation 2009 (©Municipality of Uherský Brod)*

**Analysis:** All planned measures were implemented within the project. Since work on the project has only recently been completed, it is impossible to evaluate its impacts, especially the ecological and aquaculturing impacts. Most quickly visible are the social and urban impacts. On the whole, the project has begun fulfilling its intended functions.



*After revitalisation 2009 (©Municipality of Uherský Brod)*

**Key factors for success:** The fact that the project initiator was the investor, the town authorities of Uherský Brod and the fact that the project was financed via grants were the key factors for the project's success.



## Project 23 – Morava River: Restoration of a cutoff stream branch of the Morava River - "Hrnčířské louky"

**Location:** Veselí nad Moravou / Czech Republic

**Investor/executing organisation:** Povodí Moravy, s.p. (the Morava Basin Administrator, state enterprise)/ Ekostavby Brno (private company)

**Timeline/Status:** November 2006 to October 2007



*Situation and plan (©Unie pro řeku Moravu)*

**Short description:** The project dealt with the restoration of a cutoff stream branch of the Morava River in Veselí nad Moravou town – M43 Hrnčířské meadows. In this area there were only remnants of the cutoff river branch with sediment deposits. This branch section no longer fulfilled any ecological functions. The area was polluted by municipal waste. This part of the town was unmaintained and without any suitable access.

The following measures were implemented: deposits and waste in the original branch were cleared out and the branch banks were modulated. Two new water surfaces with complex bank line solving were built up. The original vegetation was restored and other supplementary bank vegetation was planted (about 4000 seedlings). A new approach road was built.

**Basic idea:** The basic idea of the project focused on two aspects – a comprehensive cleanup of the river branch and its restoration, which could enhance the area's ecological functioning and its accessibility for town residents.

### Aims of the project

- **ecological:** The project was aimed at clearing up the area of the cutoff branch, at improving the quality of water, at increasing both the water retention capacity of the area and its biodiversity as well as at providing better conditions for nesting birds and especially a nesting site for kingfishers.

- **economic:** The project was aimed at increasing the water retention capacity of the river section and enlarging the storage cubature.
- **social:** The social aim was to make these formerly unmaintained parts of the town accessible to residents and to provide possibilities for walking and observing the restoration of natural processes.

**Initiative / "the driving force":** The main idea was developed by the investor. The measures to be implemented were also subject to consultations with and comments from the environmental bureau of the municipal office in Veselí nad Moravou.

**The planning and implementation process:** The project was implemented between November 2006 and October 2007. The suitable technological measures were designed by the design and developing company Terra Projekt. Implementation was in the hands of Ekostavby Brno (a private company)

**Public participation:** The project proposal was discussed in consultations with the environmental bureau of the municipal authorities in Veselí nad Moravou; the implementation of the nature trail occurred in consultation with the Educational Centre of Bílé Karpaty.



*Before revitalisation (2007) (© Matula, Veselý)*

**Financing:** The total project expenses come to 11,865,221 CZK (about 475,000 Euro). Of this amount 80% was allocated through the Operational Programme Infrastructure – the European Fund for Regional Development; 10% was granted by SFŽP (the State Fund of The Ministry of Environment).

**Analysis:** All intended measures were implemented. The investment was successfully completed and fulfilled the proposed aims.

**Key factors for success:** Proposal of suitable technological measures was the key factor that determined the project's success.



*New pond (2009) (© Matula, Veselý)*

## Analysis

Examples of good watercourse restoration practice in urban areas of the Czech Republic have gradually emerged in recent years. Successfully implemented projects can be found, further watercourse restoration projects are in preparation. Comprehensive implementation of so-called “urban restoration principles” is still in an initial stage. A shift in the perception of urban rivers can now be observed. Towns and cities are now motivated on their own initiative to change the appearance of rivers and their surroundings, as potentially important elements of the urban environment.

The goals associated with systematically conceived restoration measures for flowing waters in towns and cities can be divided into three main areas:

- **Town flood protection:** This is an integral part of revitalisation projects in towns. Revitalisation projects are supposed to provide a higher flow capacity if they are combined with natural elements (e.g. river bank vegetation, aquatic vegetation, wood etc.). In an ideal situation, the flowing water is allowed to follow its own dynamic and be subject to natural fluvial processes (e.g. gravel deposits).
- **Renaturation of urban watercourses, e.g. the restoration of basic ecological functions:** This aim is closely connected with the aim of town flood protection (see above). Geomorphological riverbed segmentation and wood vegetation is the formation preferred in urban areas as well as in other river sections. The face of urban rivers should be close to the natural state of rivers.
- **Integration of urban watercourses into the town structure and their opening for residents:** This social function is a special and significant part of revitalisation projects. Rivers can fulfil many social functions, e.g. recreational, sport, aesthetic, etc. From the urban and architectural point of view, rivers and riverside zones are significant spaces in towns. By providing access to rivers, the intention is to provide residents with places for various free time activities. Residents increasingly demand more green spaces in towns and cities and streams and rivers should contribute to providing them.

Revitalisation measures should be planned and implemented by considering all of the above mentioned aims simultaneously. Not only in the past but sometimes also today, watercourse restorations conformed only to the goal of flood protection. Even if this aim is important, the two other goals should not be neglected. Secure flood water transport within an urban area is a function that is relevant no more than one per cent of the time a river flows through a town. In the remaining time periods, watercourses can fulfil their ecological, social and urban functions.

### Key factors for success in watercourse restoration projects

- **Key role of towns:** Cities and towns are the main initiators of revitalisation projects in the Czech Republic. The project expenses were fully or partly covered by town or city authorities and from available funds (either European or national). Long-term and systematic activities have developed mainly in Prague (within the framework of the Programme “Streams for life”) where ten projects have been implemented or are in preparation. Chrudim has also gradually implemented the restoration of its town watercourse in several stages. Other Czech towns followed, e.g. Havlíčkův Brod, Jičín, Opava, etc.
- **Personal commitment:** Good restoration practices depend on an enlightened approach and great personal commitment. Thanks to the people involved, proposed projects have been promoted and moved forward.
- **Focus on small watercourses:** So far, revitalisation activity is mostly focused on small streams/rivers, their branches and millraces. Only a few projects have been planned for big rivers, e.g. the Morava in Olomouc.
- **Availability of funds:** Access to sufficient funds from town and city budgets is important, as is the availability of grants, most of which have come from EU programmes.



- **Availability of properties:** This is one of the biggest problems; an important step towards success is secured when the land in question is owned by the investor/watercourse administrator/initiator; in the best case the investor, watercourse administrator, initiator and landowner are the same institution or person, e.g. the authorities of the capital city Prague. Public participation can play a decisive role for securing the land needed.
- **Linking flood protection and revitalisation:** As flood protection is prioritised, revitalisation projects more likely to be accepted if they contribute to flood protection. Therefore, projects should be prioritised when they achieve both flood protection and revitalisation goals.

## Main obstacles in watercourse restoration projects

- **Availability of properties:** One of the biggest problems that arise is when the land is not owned by the state, city or watercourse administrator.
- **Public and stakeholder involvement:** This remains inadequate. The institutions concerned, landowners, etc. are regularly involved in the planning process, but often, the public is not asked to participate. Very good information about the projects, such as presentations, nature trails or booklets is often provided for the public only when the project is completed. Revitalisation projects are generally well accepted by the public in the end but there is a lack of public initiative in the beginning.
- **Persistence of technical watercourse restoration arrangements:** The staffs of town and water administrations still mostly prefer conventional technical measures because that is what they are familiar with and they have doubts about trying something new. Furthermore, there is a lack of training and relevant information about new trends and possibilities. Additionally, technical measures are cheaper and easier to implement because few properties are needed. Often only the goal of fast and secure water transport is pursued, which is still financed by the public (state) budget. Numerous towns are currently demanding sufficient flood protection. If the river administrator is willing to provide such arrangements, town authorities rarely intervene in project planning.
- **Lack of knowledge about principles of urban watercourse restoration:** Town authorities or water managers sometimes do not know the difference between technical and revitalisation measures. Therefore, it is necessary to promote training for public authorities, to present good examples from all over the world as well as from Czech towns and to share experiences from new projects. These educational activities should be extended to schools and the general public as well.

## Recommendations

The following recommendations can be formulated:

- Better public and stakeholder involvement from the beginning of the project can contribute to positive acceptance and support for the project by the general public and stakeholders.
- Linkage of flood protection and revitalisation aims is necessary.
- Effective dissemination of best revitalisation practice examples can increase the awareness of new trends and is essential to effect changes in traditional practices.
- Educational activities should be extended to schools, the general public and decision makers.
- Better cooperation between town authorities and water management authorities should be fostered.

## Summary

Urban riverside areas in the Czech Republic have been influenced by long-lasting past practices of water management. They have been segregated from urban structures and widely modified. Streams of all scales have been influenced by past practices of river management. However, noticeable progress has been made in the perception of urban rivers and in water management practices during the last fifteen to twenty years.



---

In order to find good and best practice examples, the main institutions dealing with water management and the administrations of important cities and towns were contacted and asked to participate by providing information about revitalisation projects they were involved in.

More than fifty percent of those contacted gave some feedback. Twenty-three projects were chosen as examples of complex revitalisation projects and semi-natural flood management arrangements on watercourses in urban landscapes (category A) and twelve projects as examples of traditional arrangements on watercourses with some revitalisation elements (category B). Twelve projects out of category A were chosen as best practice examples and described in detail.

There has been slow but ongoing progress in water management of urban rivers in the Czech Republic. There are some good examples of implemented projects; some are in progress and some are planned. There has been a discernable shift in the perception of urban rivers. Towns and cities are increasingly committed to changing the appearance of rivers and their surroundings, having recognised that they are such an important part of the urban landscape. The importance of ecological, technical and social aspects has also been recognised.

Cities and towns are the main initiators of revitalisation projects in the Czech Republic. Non-governmental organisations also play an important role. Revitalisation activities are mostly focused on small streams/rivers, their branches and mill races; only few projects are planned for bigger rivers.

Main factors for success:

- city/town initiative together with active and educated people in the administration,
- availability of funds and availability of land, and
- linkage of flood protection and revitalisation.

Main difficulties:

- public and stakeholder involvement is still inadequate,
- availability of properties,
- persistence of technical watercourse restoration arrangements, and
- lack of knowledge about principles of urban watercourse restoration.

### 1.2.1.3 Best practices in Germany

#### Rivers and streams in Germany

From the end of the nineteenth century until the 1970s, rivers and streams were used for sewage discharge, regulated and straightened for land reclamation and agricultural use, paved, channelled for flood protection or even tubed. Flood protection in those days meant quick water discharge with the help of technical solutions that merely shifted flood problems downstream. Waterfront areas were often used commercially. Industrial zones and technical infrastructure such as roads or railway tracks were built in the floodplains. Big rivers were extended and used as waterways.

At the end of the twentieth century, closure of industrial establishments and progress in wastewater treatment helped to improve water quality, but at the same time waterfront areas experienced structural changes because the abandoned industrial zones resulted in brownfields and deteriorated open spaces. A special challenge in different regions of eastern Germany after reunification has been the closure of numerous brown coal opencast mining districts.

To date, urban river spaces suffer from:

- deficits with respect to ecological functions (habitat and biotope network function, permeability/passability, pollution and contamination),
- deficits with respect to social functions (accessibility of the water, open spaces, attractiveness, perceptibility), and
- deficits with respect to spatial functions (segregation between cities and rivers due to technical infrastructure or neglected areas along rivers).

Since the 1980s, awareness of ecological issues has risen in both western and eastern Germany. NGOs such as nature conservation associations play a more and more important role. Some have initiated activities mainly aiming at improving the water quality and the structure of water bodies.

Gradually, nature conservation and environmental aspects have become incorporated into legislation. As a consequence, this has contributed to reducing water pollution and tackling river revitalisation. Additionally, there is increasing recognition that attention to ecological aspects in river maintenance does not hinder but indeed helps to improve flood protection. This process was greatly accelerated by the introduction of the European Water Framework Directive in 2000.

In the beginning, ecologists and land users often perceived each other as opponents. Both sides focused on defending their convictions, and this stalemate made it difficult to find solutions. However, at different international summits, the need to integrate ecological, social as well as economic issues in decision-making was repeatedly pointed out, and the will to cooperate became more and more common on both sides.

In the meantime, there is general agreement about the need for sustainable solutions and remaining differences are limited to specific aspects. Thus, cooperative planning is easier nowadays than it was in the past. However, while social aspects are now generally considered in river revitalisation projects, the inclusion of economic aspects is usually limited to the context of benefits for tourism and flood damage avoidance.

#### Approach

In Germany, projects were analysed and evaluated in southern and eastern Germany. While the City of Stuttgart focused on projects in Baden-Württemberg and Bavaria, the University of Leipzig concentrated on projects in Saxony. Both partners defined their approach independently and conducted their analysis separately.

---

## Approach for projects in southern Germany (City of Stuttgart)

The number and scope of revitalisation projects in Germany is considerable. Numerous projects are appreciated and well-known among experts as best practice examples. Therefore, the REURIS support group Stuttgart compiled a list of thirty revitalisation projects in Baden-Württemberg. Twelve projects were chosen to be analysed in detail. The choice was aimed at depicting a wide range of various projects dealing with specific problems in order to learn from the differences in approach, implementation and financing. Among other things, the projects chosen differ in terms of:

- location of the river (within cities or close to cities),
- dimension of the water bodies (from brooks to rivers),
- responsibility for the water bodies (referring to their order),
- extent of the project areas,
- project goals,
- executive organisation (small or large organisation), and
- approach (e.g. whether implementation was in the context of a state garden show or not).

Some of the projects are part of the IKoNE initiative. In 1998 the State of Baden-Württemberg has established the Integrating Conception for the Neckar Catchment Area (IKoNE, *Integrierende Konzeption Neckar-Einzugsgebiet*) as a tool to initiate and coordinate activities to enhance the sustainable development of the Neckar river catchment within the framework of various demands. The Regional Council Stuttgart is responsible for managing the programme. The conception IKoNE is aimed at improving flood protection and precautionary measures, at improving the ecological condition of the waters, at improving water quality and at improving basic data and instruments.

The data of the best practice examples were collected during visits of the sites, in interviews with persons responsible for the project realisation, through evaluation of plans, photos, brochures and press articles, literature research and research on the Internet. The interviews followed a questionnaire specifically developed for this purpose. Analysis and evaluation followed common assessment criteria focusing on issues that promote or impede project development, most difficult obstacles and key factors for success.

## Approach for projects in Saxony (University of Leipzig)

One of the first steps of the project, obviously, had to be the appraisal of river revitalisations in the project area. By networking, contacting experts in the field, and searching the Internet, cases of revitalisation were not only simply identified but assessments of the most successful cases were also compiled. Cases mentioned more often than others were subject to close scrutiny. Criteria for best practices selection were defined according to the research topics within REURIS: On the one hand, private involvement in financing a revitalisation project was one major criterion. On the other hand, criteria were accessibility of the river, public acceptance of the initiatives, public relation activities within the project, comparability to REURIS own work, exemplary planning and realisation of the project. Data were collected via literature and Internet research. In addition, appropriate interview partners were asked for relevant information and for additional sources.

To facilitate selection of the best practices that meet the criterion of private financing, a survey among all forty-six communities in Saxony with at least fifteen thousand inhabitants and other relevant stakeholders was conducted. As a result, two best practices have been chosen: The mill stream Pleißemühlgraben in Leipzig (one-third financed by private riparian owners) and the stream Weidigtbach in Dresden (managed to a large extent by the Residential Building Cooperative Eisenbahner-Wohnungsbaugenossenschaft Dresden eG, which thus indirectly contributes to financing by paying staff costs). In addition, the Weidigtbach and the Pleißemühlgraben, like the Parthenaue in Taucha and the Kaitzbach in Dresden, also meet the other criteria of accessibility, public acceptance, exemplary planning and realisation, etc. All four have been selected as best practice examples for the other above named criteria.

## Overview of the projects

Table 1.2-6: Projects analysed in Germany (© City of Stuttgart, University of Leipzig).

No.	Name	Location (city)	Executing organisation	Status, year of completion	Main goal(s)
<b>Baden-Württemberg and Bavaria (analysed by the City of Stuttgart)</b>					
1	Neckar: Restoration of the Neckar River in Villingen-Schwenningen	Villingen-Schwenningen	City of Villingen-Schwenningen	2010	ecological social
2	Neckar: State Garden Show Plochingen	Plochingen on the Neckar	City of Plochingen	1998	spatial social ecological
3	Neckar: "Saugraben"	Stuttgart, District Hofen	City of Stuttgart	in progress	ecological
4	Neckar: "Neckarauenpark"	Stuttgart, District Bad Cannstatt	City of Stuttgart	2003	social ecological
5	Neckar: "Zugwiesen"	Ludwigsburg	City of Ludwigsburg, Water and Shipping Authority of Stuttgart	in progress	ecological
6	Neckar: "Uferwiesen"	Ludwigsburg	City of Ludwigsburg, Water and Shipping Authority of Stuttgart	2009	ecological social
7	Ramsbach: Renaturation of the upper course of the Ramsbach	Stuttgart, District Degerloch	City of Stuttgart	2008	ecological
8	Neckar and Elz: Semi-natural remodelling of the rivers Neckar and Elz	Mosbach-Neckarelz	City of Mosbach	2002	ecological
9	Elz: State Garden Show Mosbach	Mosbach	City of Mosbach	1997	economic social
10	Schutter: Remodelling of the mouth of the Schutter	Kehl	Water body Directorate Southern Upper Rhine/High Rhine, Ad-hoc Association for Flood Protection "Mouth of river Schutter"	2002	ecological
11	Neckar and Rhine: blau_mannheim_blau	Mannheim	City of Mannheim	in progress	spatial economic social ecological
12	Isar: Isar-Plan	Munich	City of Munich, State of Bavaria/Bavarian Water Management Agency	in progress	ecological social
<b>Saxony (analysed by the University of Leipzig)</b>					
13	Pleißemühlgraben	Leipzig	City of Leipzig, Department of Urban Green Areas and Watercourses	in progress	economic social
14	Weidigtbach	Dresden	City of Dresden, Environment Office, Residential Building Cooperative Eisenbahner-Wohnungsbaugenossenschaft Dresden eG (EWG)	2014 at the earliest/ in progress	economic , ecological social
15	Parthenaue	Taucha	Zweckverband Parthenaue	in progress	ecological social
16	Kaitzbach	Dresden	City of Dresden, Environment Office, Federal Ministry of Education and Research, Ökoprojekt Elberaum	16a: 1994-97, 16b: 2005-06	ecological social



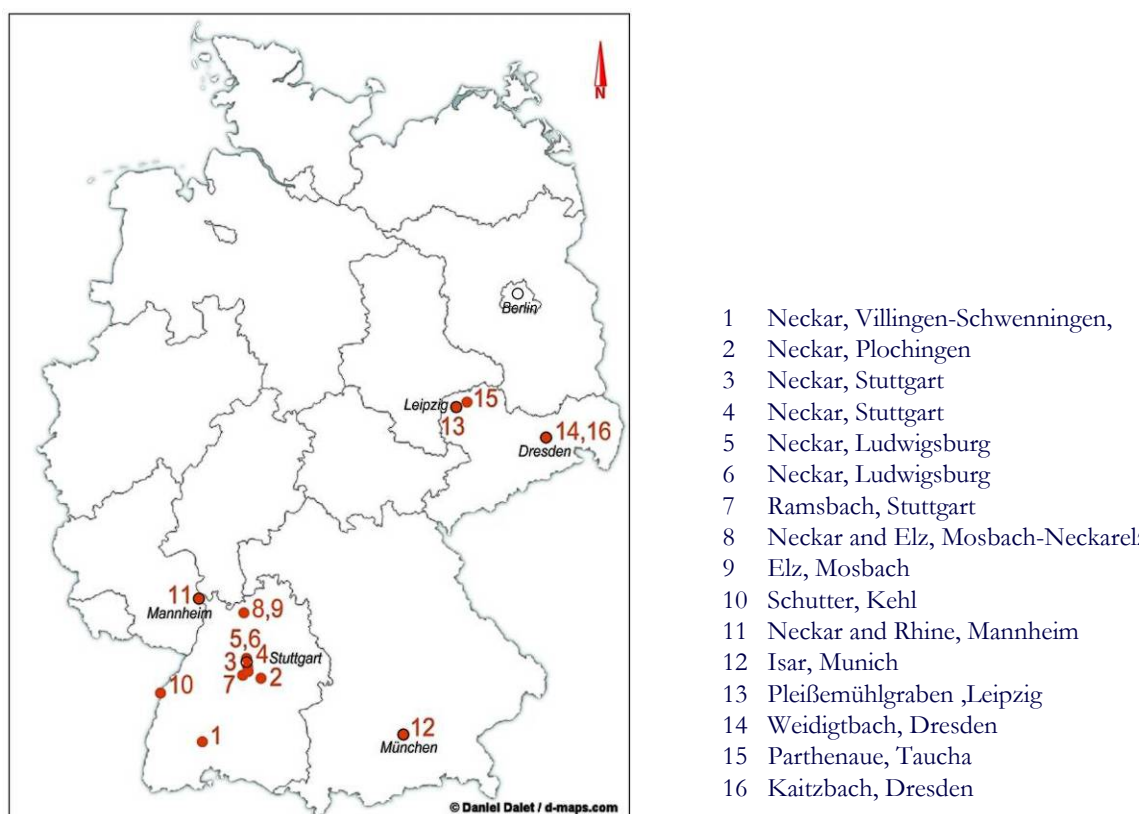


Figure 1.2-6: Projects analysed in Germany: 1-12 Southern Germany, 13-16: Eastern Germany (© Municipality of Stuttgart; map basis: Daniel Dalet / d-maps.com).

## **Best practice examples in Germany**

## Project 1 – River Neckar: Restoration of the Neckar in Villingen-Schwenningen

**Location:** Villingen-Schwenningen, Baden-Württemberg / Germany

**Investor/executing organisation:** City of Villingen-Schwenningen

**Timeline/Status:** 1997-2010

**Extent:** section of about 3.5 km of the Neckar

**Short description:** The Neckar has its source in the moor “Schwenninger Moos” close to the city of Villingen-Schwenningen. The town is the first urban area the Neckar flows through. Due to massive pollution by commercial and private sewage the Neckar was tubed in the 1960s and vanished completely from the townscape. As a result of the city’s growth, increasing sealing of the soil surface and more and more heavy rainfall events, the municipal canal system was often overloaded.

Revitalisation of the Neckar comprised the opening of the Neckar within the city, creating a new green axis and open spaces. It also included its semi-natural design and integration into the townscape. One stretch of about 1,5 km is part of the State Garden Show Villingen-Schwenningen which was held in 2010.



*Land was acquired by property exchanges with the neighbouring company (©Municipality of Stuttgart)*

**Basic idea:** Although Villingen-Schwenningen’s surname is “source of the Neckar”, the river was not present and perceptible in the city. Thus, the planners meant to restore the original townscape and the town’s identity by opening the tubed Neckar. At the same time flood protection could be improved by discharging/relieving the municipal sewage system.

### Aims of the project

- **ecological:** creation of habitats for plants and animals, improvement in the town’s climate and the environmental quality
- **economic:** improving the drinking water supply, relieving the canal system and thus decreasing costs, flood protection and improving the touristic attractiveness, contribution to strengthening the soft location factors of Villingen-Schwenningen
- **social:** enhancement of the townscape, improvement in the quality of life and of recreational potential
- **planning/urban development:** enhancing the city’s attractiveness and upgrading the public image of Villingen-Schwenningen

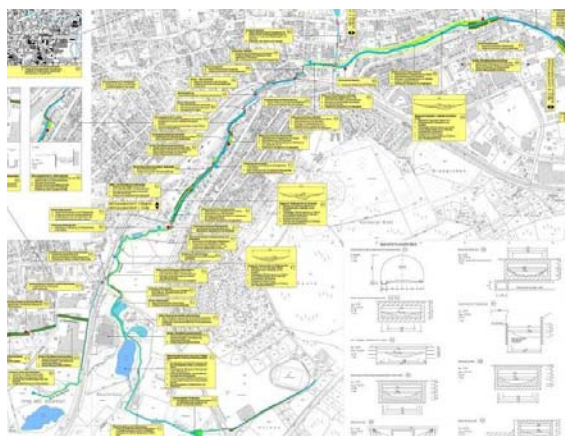
**Main goal:** The main goal was to improve flood protection and to upgrade the ecological conditions and the water quality.

**Initiative / “the driving force”:** As early as the 1970s and 1980s the former Head of the Department of Green Spaces and the Environment recognised the importance of opening of Neckar River. Lacking support from local politicians, he pursued his goal step-by-step. In the 1980s he began implementing restoration along model sections of the river financed with funds from river maintenance, in order to showcase the results and convince decision-makers and the public. His successor shared his commitment and continued this work.

**The planning and implementation process:** At the end of the 1970s the water supply of the Schwenninger Moor – the source of the Neckar - was restored, a precondition for revitalisation. In the 1980s the former Head of the Department for Green Spaces and Environment started with implementing model stretches to convince decision-makers and the public.

A waterbody development concept was compiled. In 1999 a future conference allowed the public to get involved. In 2001 the city council took the general decision to restore the Neckar. In 2003 the Department of Green Spaces and the Environment initiated an application for participation in the State Garden Show as an instrument for moving ahead with the project. For a long time the project lacked widespread support and was discussed controversially. The commitment and staying power of the project staff eventually led to its success. The project is now part of the IKoNE initiative and the initiative “Our Neckar” that backed the project.

**Implementation:** The project was divided into four construction sections that reflected the availability of property and financing. The planning period lasted eleven years (1997–2008), the construction phase eight years. The “new” opened Neckar is fed by clean water from sources and tributaries. The sewage system remained tubed in the underground. Wherever possible the Neckar was relocated to its original river bed. The properties needed ground were won by various means, e.g. by dismantling a street, by transferring a cycle path onto a public street, by rededication of the former river bed to a commercial area and by using a former brownfield. Wherever possible the river bed was designed to create in a semi-natural state. To mitigate the loss of water through seepage, the river bed was sealed up with film.



Overview of the construction sections and measures.  
(©City of Villingen-Schwenningen)

**Maintenance:** Among other measures, maintenance of the newly created river bed will comprise weed control and is carried out by the city of Villingen-Schwenningen.

**Public participation:** Besides the various administration units the local agenda-21 group as well as organisations for nature conservation were involved in drafting the waterbody development concept. In 1999 a future conference offered the public an opportunity to become involved. Various information events and open councils were held. People directly affected were informed by mail and in personal visits.

**Financing:** The costs amounted to about 11 million Euro. The State of Baden-Württemberg contributed 5.3 million Euro. The city’s contribution of 3.5 million Euro was paid by budget funds. The remaining 2.2 million Euro were raised by impact mitigation charges as well as by set-offs of benefits from the municipal utilities for the sewage treatment plant’s discharge. The land was acquired by purchase and exchange.



Construction section 1 –Land was obtained by conversion of a street into a combined footpath and cycle way (©Municipality of Stuttgart).

**Analysis:** A holistic approach was pursued, integrating social, ecological, economic and spatial issues. All goals could be met and the project is a well-known and recognised practice example. Stakeholders were involved very intensively. The city now features a new green axis, and the area is very popular among citizens and tourists.

**The most difficult obstacles:** land acquisition, lack of public support, hierarchical structures rather than an interdisciplinary team, negative media reporting and lack of public appreciation in the initial phases

**Key factors for success:** Key factors for success were mainly public relations activities, public involvement and the accomplishment of measures such as the establishment of model stretches. Without the commitment and staying power of the executive organisation, the project would not have been realised. Helpful were the funding programmes by the State of Baden-Württemberg as well as the State Garden Show 2010 which worked as a vehicle to shorten the planning and implementation period.



## Project 2 – River Neckar: State Garden Show Plochingen

**Location:** Plochingen on the Neckar, Baden-Württemberg / Germany

**Investor/executing organisation:** City of Plochingen

**Timeline / Status:** 1989-1998

**Extent:** area of about 16 ha, river section of about 1 km

**Short description:** The inner city of Plochingen is located close to the northern bank of the Neckar River. One hundred fifty years ago railway tracks were built; later on roads were constructed that separated the city from river. The river banks were paved. The project met the goals of linking the inner city with the river by building a pedestrian underpass under the road and railway tracks. On the opposite river bank an area in need of urban renewal was developed as an open space including renaturation measures on the Neckar and its tributary Fils. This now serves as a recreation area for citizens.

**Basic idea:** The project was meant to reconnect the inner city of Plochingen with the Neckar River as well as to create new open spaces for recreation by developing an area in need of renewal.

### Aims of the project

- **ecological:** enhancing natural structures along the Neckar riverside, creating habitats for plants and animals
- **economic:** strengthening soft location factors and improving the city's competitiveness by enhancing its attractiveness and the quality of life
- **social:** improving the quality of life by creating new open spaces for recreation and providing a high-quality housing area close to the river: "Riverside Living"
- **planning/urban development:** restructuring an area in need of renewal, overcoming the separation of the city and the river and regaining the river space as a semi-natural recreation area

**Main goal:** restoring the relationship between city and river, adding to the open spaces and improving the ecological conditions

**Initiative / "the driving force":** After completion of the inner city's restoration, the mayor of Plochingen and the chief officer of the building department aimed to continue by improving the situation of the open spaces and restoring the links between the river and city. They initiated and promoted the project.



*A restored underpass under road and railway tracks link the inner city with the river Neckar. (© Municipality of Stuttgart)*

**The planning and implementation process:** In 1987 the City of Plochingen organised an idea competition to find ways to connect the inner city and the Neckar River. These preparatory studies served as an initial impulse for tackling the project. As Plochingen featured only a few open spaces, the idea emerged that a recreation area for permanent use should be established. In 1988 Plochingen submitted its bid to become the venue of the State Garden Show in 1998 and was selected by the jury. The competition for realisation of the project was organised in 1993. The land was purchased from various private owners, one owner who did not want to lose her garden plot was allowed to keep her site.

**Implementation:** Construction commenced in 1996. The State Garden Show was opened in 1998 – the year of the fifth anniversary of Plochingen's status as a town. A restored pedestrian underpass under the road and railway tracks now links the inner city with the Neckar River. Three newly created footbridges enable citizens to reach the open space on the opposite side of the river in only a few minutes. A loop road offers people an opportunity to experience the Neckar and the confluence with its tributary Fils as well as the city's attractive skyline. Relocation of the embankment has extended the retention area by about 22,000 m<sup>3</sup>. The dense plant cover of the forelands has been thinned out, the woody plants have been transferred

and now conceal the traffic infrastructure defining the southern border of the area. The paved river banks have been partially renaturalized and flattened, a river branch has been built. Various spots allow direct access to the waterbody.

**Maintenance:** The forelands are maintained by the Umweltzentrum Neckar-Fils (Centre for the Environment) which is run by the Naturschutzbund (Nature and Biodiversity Conservation Union). The grass areas are mowed and maintained by a private citizens' group composed of senior citizens whose work is acknowledged with an annual lunch event.

**Public participation:** Some citizens opposed the project. The city council decided to hold a public referendum in 1994. A lot of information events were held and ultimately the decision to realise the project was supported by a big majority. The day-to-day-business decisions were taken in close cooperation between the administration, city planners and landscape architects. From the beginning, plans were made to involve citizens' associations to continue use of the area after the State Garden Show.



*Playground on the former State Garden Show grounds, now called "Landscape and Scenery Park Brückenwasen"*  
(©Municipality of Stuttgart)

**Financing:** The costs amounted to about 7.5 million Euro (14.6 million DM not including the costs for the housing area). The State of Baden-Württemberg contributed 3.1 million Euro (6 million DM). The land was purchased from various private owners. The city's contribution was allocated from budget funds.



*The forelands of the Neckar River were flattened, the woody plants thinned out, a river branch constructed. The housing area Brückenwasen (left) offers residents a high quality of life.*  
(©Municipality of Stuttgart)

**Analysis:** A holistic approach was pursued integrating social, ecological, economic and spatial issues. All goals could be met. The area is very popular among citizens and is a notable addition to the city's recreation areas and open spaces.

**Key factors for success:**

- close cooperation of the departments and institutions involved
- public relations activities, public referendum
- the implementation in the context of the State Garden Show was of key importance in realising and financing the project
- support from the public after the referendum was held
- close cooperation of all the people involved

## Project 3 – River Neckar: “Saugraben”

**Location:** Stuttgart, District Hofen, Baden-Württemberg / Germany

**Investor/executing organisation:** SES Stadtentwässerung Stuttgart

**Timeline/Status:** begun in 1994 /still in progress

**Extent:** 200 m along the bank of the Neckar River, about 9,000 m<sup>2</sup>

**Short description:** At the beginning of the twentieth century the river Neckar was regulated from Plochingen downstream until it flows into the Rhine. The banks were paved so ships could use it as a waterway. The river lost its connection with the floodplains and adjacent habitats and refuges for plants and animals.

Along a stretch of about 200 m the paved river banks of the Neckar River are to be replaced by semi-natural structures. A river branch with islands and bights as well as a standing waterbody will be created on a former raspberry plantation and unused arable land.

**Basic idea:** The project is intended to provide new habitats for plants and animals by enhancing natural structures along the banks of the Neckar River.

### Aims of the project

- **ecological:** enhancing natural structures along the riverside of the Neckar, linking water and land, providing a wide range of varied local conditions in order to enhance the various typical Neckar species.
- **economic:** The federal state as responsible authority for the federal waterway had to secure navigability by renewing the banks
- **social:** upgrading the landscape scenery

**Main goal:** The main goal is the improvement of ecological conditions.

**Initiative / “the driving force”:** Since the 1980s the Subdepartment for Landscape Planning and Green Structure Planning of the Municipality of Stuttgart has pursued ideas and plans for improving the ecological situation along the Neckar, a federal waterway. As an impact mitigation measure for various building projects the area “Saugraben” is now being realised.

**The planning and implementation process:** The project area was one of twenty-five proposed revitalisation measures in the city region of Stuttgart. In 1994 the SES Stadtentwässerung Stuttgart (owner-operated municipal enterprise responsible for wastewater drainage) required space to build a combined screening unit and grit chamber. The project “Saugraben” was designated an impact mitigation measure. Four further projects are being compensated in the same way.



*Only the first construction section has been implemented yet.*  
(©Municipality of Stuttgart)

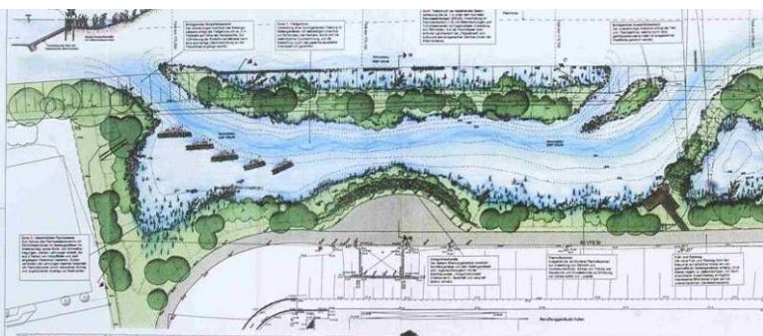
The combined screening unit and grit chamber went into operation in 2001. The impact mitigation measure was supposed to be completed in 2003 at the latest, but various problems led to delays. The landscape management support plan misrepresented the actual situation. It became apparent that the costs would be much higher than estimated. The project area was needed for building site facilities for an additional measure. A temporary bridge next to the area first had to be replaced by a new permanent one some hundred meters downstream.

Evaluation showed that the steep concrete banks on the Neckar were in need of renewal. On the one hand this enabled planners to include ecological improvements along the bank; on the other hand, it caused further delays. Eventually, the decision was reached to divide the project in two construction sections and to start with the first one. The first construction section has almost been completed, the second construction section is in progress.

**Implementation:** The concrete banks of the Neckar will be dismantled along a stretch of about 200 m and more natural structures restored. Flattened banks are fostering the growth of reeds and tall forbs. A river branch will provide a wide range of varied local conditions in order to foster the various typical Neckar species. A channel will provide habitats for rheophilic animals. Drift that helps to avoid mud deposits is encouraged by the special design of the influx area and some groyne constructed from fascines. Shallow and deep water areas, reed zones, islands, gravel banks, areas left to succession and deadwood are further elements of the newly developing habitats. The island between Neckar and



the river branch will house species of softwood floodplains. A steep slope has been secured with bio-engineering methods (*Krainermwand*). The area is located close to the supra-regional cycle way along the Neckar River and thus will contribute to enhancing its quality.



*Plan of execution by Büro Geitz&Partner  
(©Municipality of Stuttgart)*

**Maintenance:** The maintenance of the site will be divided and secured in part by the Municipality of Stuttgart and in part by the water and shipping administration. The riverside bank protection, islands and breakwaters are maintained by the WSA. The remaining area is the responsibility of the Municipality of Stuttgart, Department of Gardens and Parks, and is financed by budget funds.

**Public participation:** In the context of the planning approval procedure, both the public agency and the people affected were involved de jure. The district councils were informed about progress on the project.

**Financing:** As an impact mitigation measure the project has to be financed by the investor (about 1 million Euro). The first cost estimate assumed that only about 700,000 Euro would be required. The missing sum of 300,000 Euro is now the subject of discussions about who will have to pay.



*The standing backwater joins the Neckar by a small access. After completion of the second section of construction the water will be able to pass through. (©Municipality of Stuttgart)*

**Analysis:** The project has not yet been completed. The mitigation measure should have been realised two years after completion of the construction measure (impact) at the latest – thus, the goal of impact mitigation has not been met satisfactorily.

**Key factors for success:**

The project area was already in possession of the Municipality of Stuttgart. The idea for the project was first conceived in the 1980s and draft plans were prepared. The need of an impact mitigation measure helped to raise the necessary funds. A competent planning office was commissioned with drafting a plan for executing the project.

**The most difficult obstacles:**

It became apparent that the costs would be much higher than estimated. Discussions about the cost allocations now hinder the implementation process. The need for additional planning and funds in the context of bank renewal as well as the necessity to find specialised firms caused delays.



## Project 4 – River Neckar: Neckarauenpark

**Location:** Stuttgart, District Bad Cannstatt, Baden-Württemberg / Germany

**Investor/executing organisation:** Municipality of Stuttgart

**Timeline/Status:** 1991-2003

**Extent:** Section of 1,500 m of the Neckar River bank

**Short description:** At the beginning of the twentieth century the Neckar River was regulated from Plochingen downstream to where it flows into the Rhine to allow ships to use it as a waterway. In the project area the steep banks were paved with concrete, the area along the Neckar was used for barracks and brownfields.

In the context of the project the concrete river banks were replaced with packages of water stones, some shallow water zones were created and an area in need of urban renewal was developed as an open space now serving as a recreation and play area for citizens.



*Seating arrangements from natural materials  
(©Municipality of Stuttgart)*

**Basic idea:** Since the 1980s the Department of Landscape and Green Structure Planning of the Municipality of Stuttgart has drafted plans to improve the ecological situation and to create open spaces along the Neckar, a federal waterway. This project was one of the first to be realised. A commercial area was rezoned to become an open space.

### Aims of the project

- ecological: creating new habitats and improving the ecological conditions
- social: provide access to the water and create space for recreation and play.
- planning/urban development: creating open spaces next to residential areas

**Main goal:** The measures were intended to provide access to the water and create space for recreation.

**Initiative / “the driving force”:** The first draft was developed by the Department of Green Structure Planning, Municipality of Stuttgart and pursued in collaboration with the Department of Gardens and Parks.

**The planning and implementation process:** The Department of Landscape and Green Structure Planning of the Municipality of Stuttgart has compiled ideas and drafted plans to improve the ecological situation and to create open spaces along the Neckar. A first sketch was drawn to present ideas for the area. When the Allianz Environmental Foundation Munich was established in 1990, its staff sought a pilot project to support. The Municipality of Stuttgart presented the project to the foundation, which decided in favour of the project.



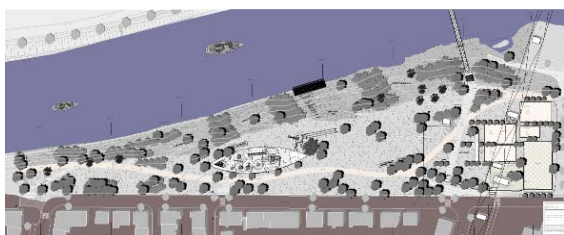
*A visitor platform offers opportunities to experience the river and the industrial complex on the opposite bank (©Municipality of Stuttgart)*

The first drafts in 1990 proposed flattening the banks and forelands and creating habitats for plants and animals. These plans could not be realised because technical infrastructure on the site could not be relocated. Additionally, implementation would have caused spring water to surge to the surface (the springs in Stuttgart constitute the second largest reservoir in Europe). New plans took these circumstances into account; the result was that a shallow water area could be realised only on a small part of the site. Construction commenced in 1991; the first construction section was completed in 1993, the

second one in 1994. The third construction section (1999-2003) was incorporated into a renewal area in the Bad Cannstatt district focusing on urban upgrading and establishing recreation areas. The whole area became a public park with low-intensity use of meadows – the “Neckarauenpark”.

**Implementation:** On both sides of the Neckar the concrete banks were replaced with large square stones and structures made of water stones with various sizes. Most of the area was designed as an open space with meadows, footpaths and cycle routes. A visitor platform offers opportunities to experience the water. A small part was designed as a habitat for plants and animals (standing waterbodies, shallow water area). An innovative playground was built: the “Neckarine”, a play facility in the form of a ship. It was awarded the “Deutscher Spielraumpreis 2004” by the magazine *Stadt und Raum*. There are also sports facilities such as a rock climbing facility on a pylon of an old railway bridge, a football pitch and boules alleys.

**Maintenance:** The area is maintained by the Department of Garden and Parks within their annual maintenance budget. The banks below shore line are the responsibility of the Water and Shipping Authority.



*Neckarauenpark: draft plan (©Municipality of Stuttgart)*

**Public participation:** The project was presented and discussed with the district councils. Local citizens’ initiatives, parents and their children were informed at various events, and they participated in the planning process. Residents built a boules alley on their own initiative and restored the ruins of a historical a bridge.

**Financing:** The costs of the first and second construction stages mounted to about 3.6 million DM (about 1.8 million Euro). The private Allianz Environmental Foundation donated about 1.3 million Euro; a further 500,000 Euro were financed by mitigation fees. The third construction section costed 925,000 DM (about 473,000 Euro). As part of a renewal area it was financed by federal funds (urban development promotion programme) and by mitigation fees.



*The play ship was awarded the Deutscher Spielraumpreis 2004” (©Municipality of Stuttgart).*

**Analysis:** The ecological goals were not met as initially intended. The massive pavements with stones were state of the art at that time but from today’s perspective they appear unsatisfying and unnecessary. The other goals were met, and the area is popular among residents of the adjacent areas.

**Most difficult obstacles:** The most difficult obstacle was existing infrastructure that could not be relocated, so that the original plans could not be implemented.

**Key factors for success:** These included the early development of a draft plan, the donation from the Allianz Environmental Foundation as well as the opportunity to incorporate the third construction section into the renewal area.



## Project 5 – River Neckar: “Zugwiesen”

**Location:** Ludwigsburg, District Poppenweiler, Baden-Württemberg / Germany

**Investor/executing organisation:** City of Ludwigsburg and Federal Water and Shipping Administration, represented by the Water and Shipping Authority of Stuttgart (WSA)

**Timeline/Status:** begun in 1996, in progress, construction begun in 2011

**Extent:** area of about 17 ha, river bank of about 1 km

**Short description:** Downstream from the city of Plochingen the Neckar River is regulated and used as a waterway. Barrages like the one close to Poppenweiler guarantee that the required water level is maintained but impede passability for animals. The river banks are paved and steep.

Plans foresee a barrage with a bypass stretch that will provide passability. The banks of the Neckar will be altered according to a semi-natural design, a backwater and standing waterbodies are intended to provide new habitats for plants and animals. A visitor platform will provide a viewing point.

**Basic idea:** In 1996 the Department for Green Spaces and Ecology of the city of Ludwigsburg developed preliminary ideas for the project that was aimed at improving the ecological conditions on the Neckar and at bypassing the Poppenweiler barrage and thus providing passability for aquatic animals.

### Aims of the project

- **ecological:** providing passability of the Poppenweiler barrage, enhancing natural structures, creating habitats for plants and animals
- **economic:** It is the responsibility of the federal state to ensure safety in navigation on the waterways.
- **social:** creating a recreation area close to the city and providing access to parts of the area for visitors

**Main goal:** providing passability of the Poppenweiler barrage, improving the ecological conditions along the river Neckar.

**Initiative / “the driving force”:** The Department for Green Spaces and Ecology of the City of Ludwigsburg developed the idea for the project and moved the project forward.

**The planning and implementation process:** In 1996 the Department for Green Spaces and Ecology of the city of Ludwigsburg developed preliminary ideas for the project. In 1998 the State of Baden-Württemberg set up the IkoNE<sup>1</sup> initiative and began looking for an area in which to implement a model project. The Department for Green Spaces and Ecology of the city of Ludwigsburg proposed the area “Zugwiesen”. The planning period took nine years as land acquisition caused some delays: At first, farmers claimed land prices that were too high. The project will be part of the eco-account of Ludwigsburg

During the planning of the measures to be implemented, the WSA announced that the banks had to be restored by dismantling them down to the riverbed. The city seized the opportunity to modify the plans. In cooperation with the WSA they succeeded in enlarging the connection zone between the planned back water and the Neckar. The project is part of the IkoNE<sup>1</sup> initiative, the initiative “Grünzug Neckartal” as well as the “Greater Stuttgart Landscape Park” (Verband Region Stuttgart) that backed the project.



*The area of the project, used before revitalisation for farming  
(©Municipality of Stuttgart)*

**Implementation:** The barrage of Poppenweiler will be bypassed by a newly-created watercourse of about 1,7 km which is designed to be semi-natural. The bank reinforcements of the Neckar will be dismantled and restored to a semi-natural state on a stretch of about 800 m thus permitting creation of an extensive connection zone between the Neckar and a new backwater. Standing waterbodies of about 3.8 ha, shallow and deep water areas, reed zones, islands and gravel banks are further elements of the newly developing habitats. The transregional cycle route along the river Neckar passes through the area. It will bypass sensitive areas but nevertheless allow people to experience the new semi-natural area. An observation tower will provide a view over the project.

**Maintenance:** The maintenance of the site is divided between the city and the Water and Shipping Authority (WSA). The riverside bank protection, islands and breakwaters are maintained by the WSA. The remaining area is the responsibility of the City of Ludwigsburg. Farmers will be charged with maintaining the meadows and woody plants.

**Public participation:** In the context of the planning approval procedure both the public agency and the affected people were involved de jure.

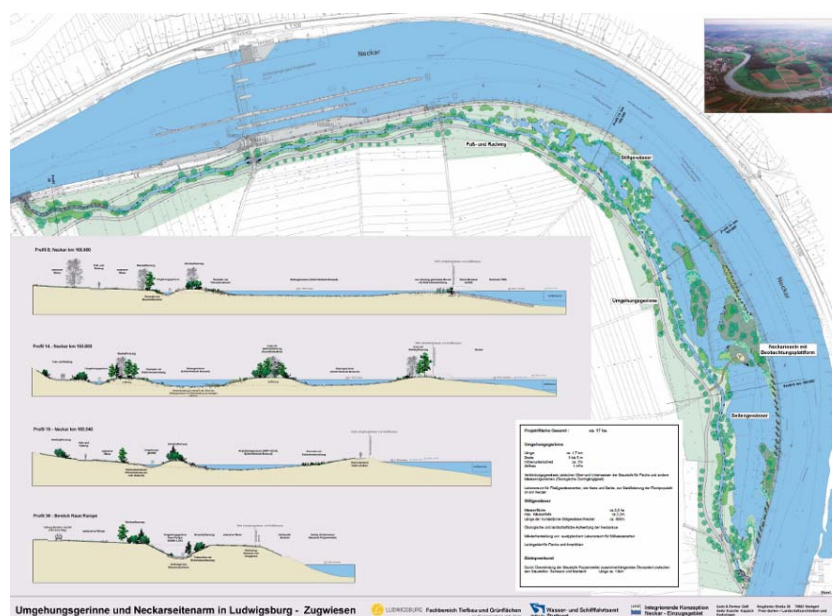
The Advisory Council on Environmental Issues of the county of Ludwigsburg was also engaged in the process.

**Financing:** The project is being implemented by the City of Ludwigsburg in cooperation with the WSA of Stuttgart. Implementation – planning, tender and financing - is divided into two parts according to the responsibilities. The costs are estimated to amount to about 8.35 million Euro. The part of the WSA is estimated to amount to 3 million Euro. The city's contribution is calculated to amount to 5.35 million Euro. Various subsidies totalling 1.65 million Euro are contributed by the lottery "Glücksspirale", the Verband Region Stuttgart, the State of Baden-Württemberg, and a private foundation. The visitor platform is sponsored by the "Foundation

Euronatur". The remaining costs of 3.7 million Euro are financed by mitigation fees. The costs for the maintenance under the city's responsibility are estimated to amount to about 10,000-15,000 Euro per year that will have to be paid to farmers who will care for the area.

**The most difficult obstacles** were the difficulties in land acquisition as well as a lack of appropriate planning offices – in the Stuttgart region there are only a few offices that are familiar with the demands of federal waterways.

**Key factors for success:** The increasing appreciation of ecological issues and the awareness of the importance of "rivers as lifelines" on a public and political level as well as the fact that the project contributes to the eco-account facilitated the project idea. Important factors for success were the close cooperation between the city of Ludwigsburg and the Water and Shipping Authority of Stuttgart, face-to-face contacts with important people at the right time, subsidies by various sponsors, the incorporation of the project into superior level planning as well as a new order by the Federal Water and Shipping Administration backing the integration of ecological aspects into river bank maintenance.



*The project plan by Büro Geitz&Partner (©City of Ludwigsburg)*



## Project 6 – River Neckar: “Uferwiesen”

**Location:** Ludwigsburg, District Hoheneck, Baden-Württemberg / Germany

**Investor/executing organisation:** City of Ludwigsburg and the Federal Water and Shipping Administration, represented by the Water and Shipping Authority of Stuttgart (WSA)

**Timeline/Status:** 2005-2009

**Extent:** section of about 500 m of the Neckar River bank

**Short description:** East of Ludwigsburg the Neckar river is regulated and used as a waterway. From 1920 to 1968 the river was paved by steep concrete banks. The existing open spaces along the Neckar were not very popular, because a dense belt of woody plants on the banks prevented people from reaching the water. The project flattened the banks of the Neckar and implemented a semi-natural design and created various structured banks with shallow water areas and bights and islands that provide new habitats for plants and animals. The woody plants on the banks were thinned out to offer people more direct access and an experience of the river.

**Basic idea:** The implemented measures focused on “linking the residents of Ludwigsburg with their river”, on providing areas for recreation and sports activities and on combining these measures with improvements of ecological conditions along the Neckar.

### Aims of the project

- **ecological:** enhancing natural structures and creating habitats for plants and animals
- **economic:** The federal state as responsible authority for the federal waterway was responsible for securing the navigability by renewing the banks.
- **social:** providing areas for recreation and sports activities
- **planning/urban development:** providing areas for recreation close to the city

**Main goal:** providing areas for recreation and simultaneously improving the ecological conditions

**Initiative / “the driving force”:** The Department for Green Spaces and Ecology of the City of Ludwigsburg developed and promoted the idea for the project.

**The planning and implementation process:** Initial planning started in 2005 and aimed at “linking the residents of Ludwigsburg with their river”, providing areas for recreation and sports activities and combining these measures with improvements of the ecological conditions along the Neckar. As the banks of the Neckar were in need of renewal, the project was implemented in cooperation with the Water and Shipping Authority. Most of the required land was already in the possession of the City of Ludwigsburg. The project will add to the eco-account of

Ludwigsburg. Since the city’s part of the project will be financed by impact mitigation fees and no budget funds will be needed, the city council decided in favour of the project. The project is part the IKoNE<sup>1</sup> initiative, the initiative “Grünzug Neckartal” as well as the “Greater Stuttgart Landscape Park” (Verband Region Stuttgart) that backed the project.

Construction began in 2008. In 2009 the project was completed. During realisation bureaucracy hindered the implementation. The application for acceptance of technical measures after their implementation used issued after a mere phone call but now requires a written form. This caused delays and can result in deterioration in the quality of work – e.g., for measures that are implemented underwater and have to be fixed and covered at short notice.



*The bank zone now provides new habitats as well as access to the Neckar. (©City of Ludwigsburg)*

**Implementation:** The paved river banks were dismantled on a stretch of about 500 m and replaced with semi-natural structures. Bushes and groves were planted. Groynes from wood and willow fascines as well as loosely accumulated stones protect the banks from erosion. The transregional cycle route along the river Neckar passes through the area as do separate footpaths for strollers and joggers. The flattened banks and stone steps enable people to reach the river and experience the new semi-natural surroundings.



*Breakwater structures (fascines made from willow branches) stabilise the banks and support the formation of new structures. Steps facilitate access to the water (©Municipality of Stuttgart).*

**Maintenance:** Maintenance of the site is also divided between the city and the WSA. The city of Ludwigsburg and the WSA regulated the respective responsibilities by contract. Riverside bank protection, islands and breakwaters are maintained by the WSA. The remaining area is the responsibility of the City of Ludwigsburg. Apart from the accessible zones the area is left to its own development.

**Public participation:** In the context of drafting a city development concept Ludwigsburg held a “dialogue summer” in 2005 followed by a series of future conferences. The project was also presented and discussed. In the context of the planning permission procedure the public agency was involved.

The Advisory Council on Environmental Issues of the county of Ludwigsburg was also engaged in the process.

**Financing:** The project is being implemented by a cooperation effort of the City of Ludwigsburg and the WSA of Stuttgart with implementation divided into two parts according to their respective responsibilities. The WSA financed 925,000 Euro. The city’s contribution amounted to 610,000 Euro. Various subsidies totalling 70,000 Euro have been contributed by the Verband Region Stuttgart and a private foundation. The remaining costs are financed by mitigation fees. Maintenance costs that are the city’s responsibility are estimated as not exceeding the costs for earlier years.

**Analysis:** The area is popular with the residents of Ludwigsburg. As completion of the project was in autumn 2009, it is not yet possible to evaluate the ecological effects.

**The most difficult obstacles:** The most difficult obstacles were bureaucratic issues.

**Key factors for success:** These included the close cooperation of the organisations involved, subsidies by various sponsors, a new order by the WSA backing ecological aspects in the context of bank maintenance as well as the fact that the project contributes to the eco-account of the City of Ludwigsburg.



*Remodelling concept for the open space “Uferwiesen” by Büro Geitz&Partner (© City of Ludwigsburg)*

## Project 7 – Ramsbach Stream: Renaturation of the upper course of the Ramsbach

**Location:** Stuttgart, District Degerloch, Baden-Württemberg / Germany

**Investor/executing organisation:** Municipality of Stuttgart

**Timeline/Status:** 2000-2008

**Extent:** 4.41 ha, section of about 1.6 km of the Ramsbach

**Short description:** Since the 1940s the Ramsbach has been misused as a sewage system and was then canalised and paved with steep concrete banks. Damage to the banks had been repaired with ripraps, pavement and gabions. In 1960 a wastewater channel was built – a precondition for the stream’s revitalisation. In the context of renaturation the paved banks were dismantled and replaced by near-natural structures. The stretch of the Ramsbach was extended by a slightly meandering course and is now allowed to develop dynamically.

**Basic idea:** Concepts for the revitalisation of streams south of Stuttgart first emerged some time ago. Actual planning could not begin until funds were provided in the context of the Stuttgart airport extension. The basic idea was to compensate for the airport extension by upgrading and improving the waterbody system of the Korsch River and its tributaries in the neighbourhood of the airport (region “Filder”).

### Aims of the project

- **ecological:** improving the water quality, creating natural structures and habitats for plants and animals, providing continuity and passability of bridges and culverts for aquatic animals

**Main goal:** The main goal was to ecologically upgrade the Ramsbach.

**Initiative / “the driving force”:** After funds had been provided the Department of Green Structures Planning and Landscape Planning as well as the Department of Civil Engineering promoted the project.

**The planning and implementation process:** In the context of the extension of the Stuttgart airport from 1986 to 2004 an impact mitigation demand of about 17 million DM (about 8.7 million Euro) was calculated. The airport corporation was obliged to deposit these funds into the “Nature Conservation Pool”, a public-law foundation established by the State of Baden-Württemberg.

The working group “Kommunaler Arbeitskreis Filder KAF“ (communal working group of the region Filder) composed of representatives of the affected communities was charged with discussing and deciding how to utilise and share the funds and which projects should be implemented. A framework concept

“Habitat region Filder” was developed in 1991 which analysed the conditions of the various streams and ascertained priorities for renaturation. The revitalisation of the Ramsbach was one of thirty-four projects in all. Planning began in 2000. As the ownership structure was characterised by many small sections and numerous affected farmers, a realignment and consolidation of agricultural land holdings was made. The land required was compensated for by land exchange. Some farmers agreed on the condition that they could lease the land to cultivate it. Construction commenced in July 2008. In December of the same year the implementation was completed.



*The area provided sufficient space for widening the stream bed or modelling a meandering stream course. (©Municipality of Stuttgart)*

**Implementation:** The pavements were dismantled and replaced by natural structures. The stretch was extended by a slightly meandering course with a varying profile, bluffs and flat banks, reed and tall forb zones. Gritty and stony ground substrate was not only applied to the stream course but also under bridges and in culverts. Wherever possible the stream is allowed to develop dynamically supported by groynes from fascines and bedload depots. Steep banks threatened by erosion were secured with bio-engineering measures such as surface layers from willow cuttings and green sills that were allowed to develop and form new groves. Woody ground sills and rough ramps were built in order to avoid ground erosion. The stormwater overflow is mitigated and cleaned by a newly constructed retention pond that is planted with “living racks” from willows. The measures were implemented by the Department of



Civil Engineering, Municipality of Stuttgart.

**Maintenance:** The maintenance of the site is the responsibility of the Municipality of Stuttgart, Department for Garden and Parks and Department of Civil Engineering. Grassland suitable for such use is leased to farmers. They are obliged to use it as low-intensity with two cuts per year. Plantings from the bio-engineering measures must be pruned regularly to enhance biodiversity. The retention pond has to be purified and depleted. The woody plants are coppiced and thinned out every five years in order to preserve the landscape's open character that is formed by meadows.

**Public participation:** The public agency and the adjoining owners were involved in the context of the permission procedure de jure. The farmers were involved in the course of the realignment and consolidation of agricultural land holdings procedure. Additionally, the city council and the district council were informed.

**Financing:** The costs amounted to about 1 million Euro. The construction costed Euro 800,000, the land acquisition Euro 200,000. As the project served as an impact mitigation measure in the context of the Stuttgart airport extension, 90 % of the measure were financed by the "Nature Conservation Pool", a public-law foundation of the State of Baden-Württemberg. The Municipality of Stuttgart had to raise the remaining 10 % from budget funds.



*Potentially endangered zones have to be secured with stones.  
(©Municipality of Stuttgart)*

**Analysis:** As the project area is located between urban areas, ecological issues had priority. The ecological situation has improved, the newly created habitats are developing well.

**The most difficult obstacle** was the difficult land acquisition.

**Key factors for success:** These included the need for compensation in the context of the extension of the Stuttgart airport, the creative solution found in the context of the land provision as well as the fact that the farmers benefited from the realignment and consolidation of agricultural land holdings and from improvements in flood protection.



*Ramsbach: Planning of execution by Büro Geitz&Partner (©Municipality of Stuttgart)*



## Project 8 – Rivers Neckar + Elz: Semi-natural remodelling of the rivers Neckar and Elz

**Location:** Mosbach, District Neckarelz, Baden-Württemberg / Germany

**Investor/executing organisation:** City of Mosbach

**Timeline/Status:** 1999-2002

**Extent:** 8,000 m<sup>2</sup> standing waterbody, 600 m stretch of bank of the Neckar River,  
600 m stretch of the Elz River

**Short description:** At the beginning of the twentieth century the river Neckar was regulated, the banks were paved in order to allow ships to use it as a waterway. The river lost its connection with the floodplains as well as habitats and refugial areas for plants and animals. Also the course and mouth of the Elz River were paved and equipped with crossing buildings in order to provide flood protection.

On a stretch of about 1,200 m the paved river banks of the Neckar River and the Elz River have been replaced by semi-natural structures and secured with bio-engineering methods. A backwater has been created which serves as a fish nursery. Meadows formerly cultivated and now used as unimproved grasslands and flattened banks offer people sites for recreation and experiencing the river space.

**Basic idea:** The project aimed to provide new habitats for plants and animals by enhancing natural structures along the river banks and to create an area for recreation close to the city.

### Aims of the project

- **ecological:** enhancing natural structures, linking water and land, creating habitats, in particular creating a refugial area for fishes and a fish nursery ground for non-predator fishes
- **economic:** The project had to take into account the demands made on the Neckar as a federal waterway.
- **social:** improving the quality of life by upgrading of a recreational area and by optimising footpaths and cycle ways, providing access to the water, offering information on the demands that the watercourses face.
- **planning/urban development:** continuation of city development by enhancing the quality of open spaces and the quality of life

**Main goal:** The project was mainly meant to improve the ecological conditions.

**Initiative / “the driving force”:** The former water management authority “Northern Upper Rhine” was seeking an appropriate area to realise a IKoNE1 model project; the city of Mosbach sought an opportunity to realise a so-called “green project” (a kind of small garden show). The chosen area along the Neckar and the Elz met both of the requirements.



*Backwater serving as a fish nursery (©Municipality of Stuttgart)*

**The planning and implementation process:** The former water management authority “Northern Upper Rhine” sought an appropriate area to realise a IKoNE1 model project; the City of Mosbach was seeking an opportunity to realise a so-called “green project” (a kind of small garden show). The chosen area along the Neckar and the Elz met both of the requirements. The small garden show was not realised because the submission was unsuccessful. The land required was obtained by exchanges with municipal property organised by a realignment and consolidation of agricultural land holdings procedure. A subsurface investigation in the run-up to the executive planning and the cost estimates made based on six test pits later turned out to be not exactly enough. The gravel level was found to be deeper than expected. This caused financial problems as the gravel had been sold in advance. Additional funds for transporting and storing the unexpected amount of soil had to be raised. Furthermore, mass calculations had been made by using an older aerophoto which did not reflect the actual situation (aggradations)

**Implementation:** On a stretch of about 600 m the paved and partly eroded river banks of the Neckar have been replaced by semi-natural structures. A river branch connected with the Neckar has been created and now serves as a fish nursery. The standing waterbody links the river with its floodplain. Some areas were left to natural succession, others were provided with initial plantings of autochthonous groves, reeds and tall forbs. In summer the meadows are popular as sunbathing areas and playing fields. The

flattened river banks providing direct access to the water, offering people opportunities for recreation play and experiencing the river. People also enjoy the view of the newly-designed river banks from a panorama footbridge which was built in order to raise awareness of the demands that waterbodies face.

The trapezoidal cross-section of the Elz with ground sills has been replaced by an asymmetric crosssection of the main bed and flattened river banks and rock ramps. Wherever necessary the banks have been secured with bio-engineering methods. Semi-natural structures have been established. To a certain extent the river is allowed to follow its natural dynamic. The mouth of the Elz into the Neckar has been designed as a “delta” with three branches which can be viewed from a wooden bridge.



*Groynes protect the backwater. Flattened banks offer people opportunities to experience the river (©Municipality of Stuttgart).*

**Public participation:** The City of Mosbach, Department for City Development and Department Civil Engineering, closely liaised with the water management authority “Northern Upper Rhine”, district office Neckar-Odenwald, the Water and Shipping Authority of Heidelberg and the Institute for Water Management and agricultural engineering of Karlsruhe. Also the fishing club, the rowing club, associations for nature conservation and neighbouring owners were involved.



*In summer the meadows are popular as sunbathing areas and playing fields (©Municipality of Stuttgart).*

**Financing:** The costs for planning the permission documents amounted to about 64,000 Euro which were financed totally by the State of Baden-Württemberg. (125,000 DM). The realisation cost about 800,000 Euro (1,56 million DM). The State of Baden-Württemberg contributed 70%. Although the Elz as a main river is the responsibility of the state, the city of Mosbach contributed 30% mainly from budget funds, otherwise the project would not have been realised. The construction of the panorama footbridge was funded by the state programme “People and Water”.

**Analysis:** A holistic approach that integrated social, ecological, and economic issues was pursued. The planning process was based on the close cooperation of the involved institutions. All goals were met. The area is very popular among citizens and adds to the local recreation areas and open spaces.

**Most difficult obstacles:** The surveys in the run-up to the executive planning phase were inadequate.

**Key factors for success:** most important was the close cooperation between the City of Mosbach and the water management authority



## Project 9 – River Elz: State Garden Show Mosbach

**Location:** Mosbach, Baden-Württemberg / Germany

**Investor/executing organisation:** City of Mosbach

**Timeline/Status:** 1989-1997

**Extent:** area of about 19 ha, section of about 1 km of the Elz River

**Short description:** The systematic development of the Elz River since the 1950s embedded the Elz in a fixed, regular channel with a trapezoidal cross-section, partially paved banks and cross-river sills. Within the city of Mosbach the Elz and a former mill channel flow through two neglected city parks and alongside an area in need of renewal. The inner city and the open spaces were separated by a federal road.

In the context of the State Garden Show Mosbach in 1997 the existing open spaces were restored and upgraded, and a new open area was created in a section of the city in need of renewal. The Elz was partially renaturated. A footbridge crossing the federal road B 27 now links the inner city with the open spaces.

**Basic idea:** After completing urban development projects the City of Mosbach focused on strengthening the soft location factors and aimed at enhancing the attractiveness of the city by using the potential of the existing open spaces and by linking the inner city with them.

### Aims of the project

- **ecological:** improving the ecological conditions on the Elz, providing permeability and passability for aquatic animals, improving the water quality
- **economic:** upgrading the image of the city, improving its touristic attractiveness, strengthening the soft location skills, improving flood protection
- **social:** providing attractive areas for recreation close to the inner city
- **planning/urban development:** strengthening the soft location factors, enhancing the attractiveness of the city, continuity of a green axis

**Main goal:** strengthening the soft location factors, providing areas for recreation.

**Initiative / “the driving force”:** The initiative to develop the open spaces and to apply for a state garden show was taken and pursued by the city administration. The ecological upgrading of the Elz was the idea of the responsible water management authority.

**The planning and implementation process:** In 1989 the water management administration developed the “Elzbach programme” which was aimed at establishing permeability towards the river and improving the ecological conditions on the Elz.

Thirty-two single measures were drafted such as replacing low weirs and cross-river sills with rock ramps and paved banks with semi-natural structures. This concept served as a base for the revitalisation of the Elz in the Mosbach. In 1989 the city authorities submitted an application to become the venue of the state garden show and were successful. The realisation competition yielded solutions of different technical levels for handling the Elz. The visions and goals of the Elzbach programme led the jury to decide in favour of the most natural variant.

Some 90 % of the area were in the city’s possession; only a few private garden sites had to be acquired. In 1994 construction began. The concept included plans to thin out the dense population of trees and groves in the existing parks. But felling the trees led to a negative echo in public and the media. The State Garden Show in 1997 was a complete success. The area has become very popular among citizens and visitors.



*The city park with its historic design was restored and upgraded:  
(©Municipality of Stuttgart)*

**Implementation:** In the context of the State Garden Show Mosbach 1997 a system of three kinds of open spaces was created, characterised by reduced design and maintenance intensity.

Two existing open spaces of historic design were restored and upgraded. The adjacent area, which was in need of renewal, was newly designed to comprise wide meadows and playgrounds (Kleiner Elzpark, Großer Elzpark). Skateboard and inline skating facilities were implemented to integrate the interests of

youths. The Elz and a mill channel were partially renaturated. Where necessary the banks were protected with bioengineering measures. Woody plants adapted to the location were planted. The focus was laid on a dynamic development and on securing and improving flood protection. A footbridge crossing the federal road B 27 now links the inner city with the open spaces. New footpaths, cycle ways and footbridges offer opportunities for people to experience the new river spaces.



*The former area in need of renewal was newly designed and now includes wide meadows and playgrounds (Kleiner Elzpark) (©Municipality of Stuttgart).*

**Maintenance:** The Mosbach city administration is responsible for keeping up the open spaces; as a main river, the maintenance of the Elz is the responsibility of the State of Baden-Württemberg.

**Public participation:** In the context of the State Garden Show a work group was established composed of members of the state garden show corporation, representatives from various administrative departments of Mosbach and from the State Ministry of Rural Zones, from various associations as well as planners and the official commissioner for nature conservation. A club was created which cares for flower beds and carries out planting operations.

**Financing:** The costs amounted to about 8.7 million Euro (17 million DM) for the implementation of the area under permanent use including the costs of land acquisition amount to about 680,000 Euro (1.3 million DM). The State of Baden-Württemberg contributed 3.1 million Euro (6 million DM). The renaturation measures on the Elz amounted to about 460,000 Euro

(900,000 DM), financed by the State of Baden-Württemberg; the city of Mosbach contributed the land needed.

The city's part of the maintenance costs for the open spaces amounts to about 140,000 Euro annually. As the area is well accepted and very popular, ensuring that these funds are provided is not a problem.

**Analysis:** A holistic approach was pursued integrating social, ecological, economic and spatial issues. All goals were met.

The area is very popular among citizens and adds to the city's recreation areas and open spaces as well as to the city's green axes including cycle routes and footpaths.

**The most difficult obstacles:** These were the lack of money, negative media reporting and lack of appreciation at the beginning of the project. The owners of some private garden sites within the revitalisation area attempted to negotiate very high prices for sale of their properties.

**Key factors for success:** Success was facilitated by the visions and goals of the Elzbach programme as well as the potential of the existing open spaces and sufficient sites to provide the required space.



*The Elz was partially renaturated. The monotone cross-section was partially extended, partially straightened to enhance the river's diversity (©Municipality of Stuttgart).*



## Project 10 – River Schutter: Remodelling of the mouth of the Schutter

**Location:** Kehl, Baden-Württemberg / Germany

**Investor/executing organisation:** Waterbody Directorate Southern Upper Rhine/High Rhine  
Ad-hoc Association for flood protection “Mouth of Schutter River” (Zweckverband Hochwasserschutz)

**Timeline/Status:** 1998-2002

**Extent:** 8.5 km water stretch of the Kinzig River (main river) and the Schutter River

**Short description:** In the nineteenth century the meandering stretch of the Kinzig River and, in the 1970s, the Schutter River were regulated. The main channel of the Kinzig River was paved. In 1972 the mouth of the Schutter River where it met the Kinzig was dislocated contrary to the flow direction.

The project comprised: the ecological upgrading of the Kinzig within its double trapezoidal crosssection, extension of the floodplain around the mouth of the river, extension and renaturation of the lower reaches of the Schutter and replacement of the weir “Neumühle”.

**Basic idea:** As the embankments along the Kinzig and Schutter required remediation and heightening this opportunity was seized to simultaneously improve ecological conditions.

### Aims of the project

- **ecological:** improving the ecological conditions, enhancing natural and semi-natural structures, creating habitats for plants and animals, providing permeability for aquatic animals, conservation of wetlands
  - **economic:** securing and improving flood protection.
- Main goal:** securing and improving flood protection.

**Initiative / “the driving force”:** After heavy flood damage the Ad-hoc Association for Flood Protection “Mouth of the Schutter River” was constituted in 1990. Together with the waterbody directorate the existing regional flood protection programme and the programme for the remediation of the embankments were worked out and implemented in the subsequent years.

**The planning and implementation process:** In 1978 and 1983 a regional flood protection programme was developed. The embankments of the Kinzig River required remediation and heightening in order to enhance the retention and runoff capacity and secure flood protection. During the planning process it turned out that ecological issues – in particular the existence of the thick shelled river mussel (species of annexes II and IV of the EU Habitats Directive) – required more attention. The waterbody directorate and the Ad-hoc Association for Flood Protection “Mouth of the Schutter River” developed the idea to

enlarge the floodplains on the lower reaches of the Schutter in order to extend the course of the Schutter. As parts of the area added to the eco-account of the communities involved and thus would spare future land requirements, the farmers agreed. The land acquisition was arranged by exchange of private land with state properties and by purchase of sites. In order to share the impacts on the farmers equitably, land that was still suitable for cultivation was allocated proportionally. To accommodate needs of the farmers, they are in part permitted to continue cultivation on land if the site is located outside the zone with a flood recurrence period of three years. Nevertheless, the medium-term goal is the conversion of cultivated land into grassland.



*Only a ditch and some initial meanders were built; otherwise the stream was allowed to create its own bed. (©BHM Planungsgesellschaft mbH)*

**Implementation:** Construction began in 2000; other measures were implemented in 2002. Supervision of construction with respect to ecological issues ensured that the goals were met. In parts the forelands of the Kinzig River were excavated and renaturated. The embankment along the lower reach of the Schutter and its mouth was relocated by up to 160 m. The lower reach of the Schutter was newly designed, its mouth was dislocated downstream, thus extending the river stretch by 630 m. Only a ditch and some initial meanders were built, the stream was allowed to create its own bed. Leaving deadwood of tree trunks and rootstocks embedded in the banks and the river bed encouraged the development of manifold structures, washouts and eventually new meanders and serve as a

refuge for animals. The existing woody plants were replanted along the new river course and so far have delivered a very good performance. The former river bed now serves as a channel to discharge high floods, thus enabling the meandering new stretch to develop without the need for maintenance. The former weir of Neumühle was replaced by a coarse block ramp (Kinzig). All in all 40 ha new flood plains and 840,000 m<sup>3</sup> additional retention area were created, 1.45 km river stretch newly designed and 7.7 km semi-naturally remodelled.

**Maintenance:** The area is leased to farmers who are cultivating it. Partly it is used as low-intensity grassland and grazing land, partly as cultivated land. The newly designed meandering stretch of the Schutter is allowed to follow its own dynamic development and as yet does not require any maintenance.

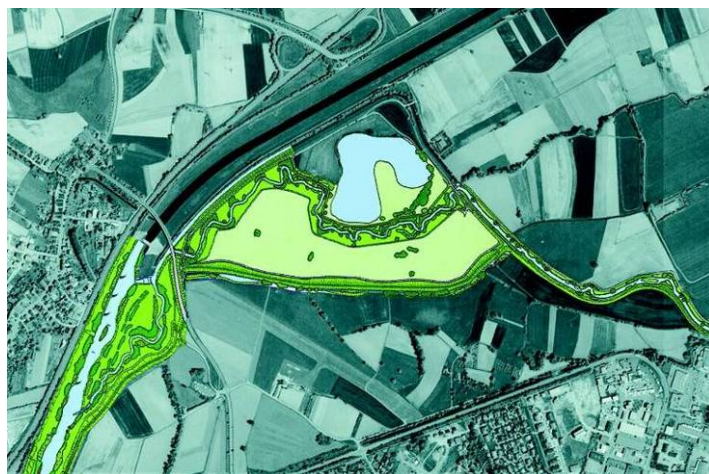
**Public participation:** In the context of the planning approval procedure the public as well as the public agency were involved de jure. Nature conservation associations were commissioned with preparing sectoral expertises. The one-to-one consultations with the affected farmers helped the project to move forward and eventually lead to success.

**Financing:** All in all the costs amounted to about 10.4 million Euro including the remediation of the embankments. The waterbody directorate funded a total of 5.1 million Euro, the association's contributed 3.5 million Euro; 70% was funded by the State of Baden-Württemberg. In the context of the EU funding programme IRMA (Interreg Rhine-Maas activities) a subsidy of 1.5 million Euro was granted.

**Analysis:** The goals were met. Furthermore, the main goal of flood protection was completed by measures aiming at improving the ecological conditions. The measures have improved the ecological situation. The newly created habitats are developing very well.

**Most difficult obstacle** was price speculation during negotiations for the sale of land.

**Key factors for success** were the local knowledge of the planners involved, one-to-one consultations with the farmers, the equitable share of the impact on the farmers, supervision of construction with respect to ecological issues, approved long-term close cooperation with the organisations involved, subsidies from the EU and the Federal State of Baden-Württemberg.



*The concept for remodelling the mouth of river Schutter by BHM Planungsgesellschaft (©Büro Henrich/Jehle and Regierungspräsidium Freiburg-Offenburg)*



*Leaving deadwood of tree trunks and rootstocks supports the development of structures, washouts and eventually new meanders. (©BHM Planungsgesellschaft mbH)*

## Project 11 – Rivers Neckar and Rhine: “blau\_mannheim\_blau“

**Location:** Mannheim, Baden-Württemberg / Germany

**Investor/executing organisation:** City of Mannheim

**Timeline/Status:** begun in 2006, in progress

**Short description:** The city of Mannheim is in the centre of the Metropolitan Region of Rhine-Neckar. The region is characterised by two rivers: the Rhine and the Neckar. The river spaces have various functions. Areas with sports and leisure facilities alternate with natural areas, wide and calm spaces and industrial zones, which contrast with one another. Due to massive structural change, some industrial zones have been or are being abandoned. “blau\_mannheim\_blau” is a framework with intends to link citizens and neighbourhoods to the rivers Rhine and Neckar by bringing the city back to the river banks, by providing easy access to open spaces and by making urban nature a daily experience.

**Basic idea:** The city of Mannheim and the Metropolitan Region Rhine-Neckar aim to position Mannheim as a leading economic location and intend to distinguish themselves from other European metropolitan regions. The idea of a “delta park” is being developed which will highlight the urban riverscapes as a trademark and unique selling point.

### Aims of the project

- **ecological:** securing existing nature reserves, creating new habitats for plants and animals
- **economic:** positioning Mannheim as a leading economic location, distinguishing the area from other European metropolitan regions, strengthening soft location factors. Furthermore, Mannheim expects the sites on the water to rise in value.
- **social:** developing a system of manifold and attractive areas for recreation and leisure activities close to the adjacent housing areas and the inner city
- **planning/urban development:** linking city quarters with the rivers and upgrading the quality of life and living within the inner city

**Main goal:** distinguishing the area from other European metropolitan regions and strengthening soft location factors.

**Initiative / “the driving force”:** In recent years the city of Mannheim repeatedly discussed possibilities for upgrading the open spaces in the vicinity of the rivers. In 2006 the City of Mannheim started the project “blau\_mannheim\_blau”.

**The planning and implementation process:** In 2006 the City of Mannheim commissioned a planning office to design a study and developmental concept for the open spaces adjacent to the watercourses. In a double-stage planning procedure with two stakeholder

workshops in 2006 and 2007, the potentials of the open spaces were analysed. Opportunities, qualities, linking potentials, deficiencies and development potentials were discussed with institutions, associations, administration representatives, clubs and stakeholders (citizens, businesses, region). The results of the study were incorporated into the development concept blau\_mannheim\_blau. The concept was completed in 2007 and presented at a symposium in October 2007. The plans met with great interest and support on the part of the stakeholders involved. Work on the concept blau\_mannheim\_blau progressed from 2008 to 2009 leading to a master plan which focused on specific areas and projects to be analysed and developed further.

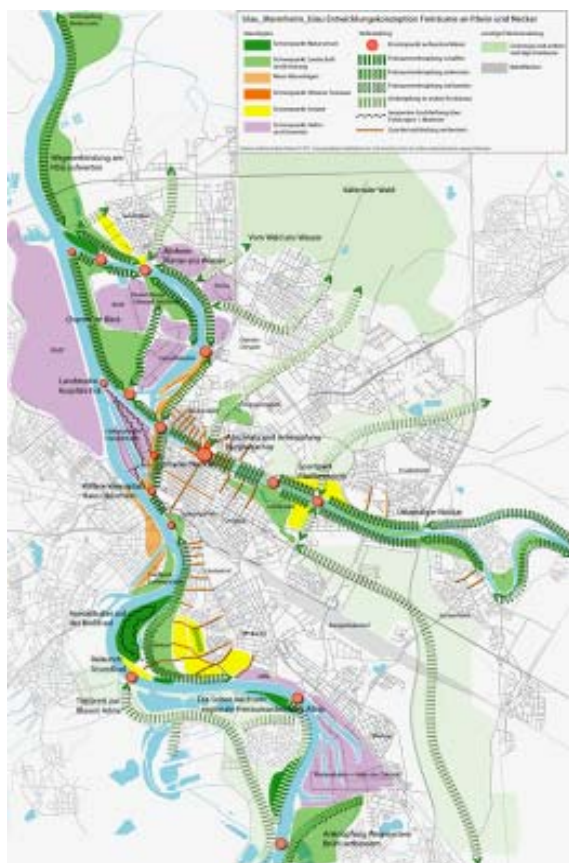
Several measures have already been realised.

Long-term planning and implementation still lie ahead for measures to link and improve the network of rivers, canals, harbours and open spaces with the city centre and adjacent boroughs within a participative process.



*Realised project: recreation within the city (© Daniel Lukac)*





*Development concept blau-mannheim-blau: framework by lobrberg-architekten (©Municipality of Mannheim)*

**Implementation:** Some individual projects have already been realised, e. g. the restoration of the “Alte Messplatz” with new access to the banks of the Neckar River via newly built stairs; installation of summer beaches, a new beach restaurant on the banks of the Rhine, a newly designed cornice along a canal connecting the adjacent pop academy and musical industry units in a formerly remote neighbourhood; spawning places for fish (oxbow lakes, naturally designed banks and vegetation).

**Public participation:** Stakeholders - institutions, associations, administration representatives, clubs and other stakeholders (citizens, economy, region) were involved by various workshops. The results contributed to the development of the concept and master plan. Additionally, a symposium on the development of urban open spaces by the riverside was held. It is intended to continue with intense public involvement.

**Financing:** Funds for the project are to be provided in a cooperative arrangement with various associations and institutions such as the Metropolitan Region Rhine-Neckar, the “Nachbarschaftsverband (Neighbourhood Association) Heidelberg-Mannheim” or the Water and Shipping Authority and by tapping various sources of funding such as EU programmes as well as funding from the federal government and the federal state. Financing is mainly linked to individual projects.

**Most difficult obstacles** were budget constraints in times of economical crisis and need to save money, lack of personnel and working time, challenging appointments and discussions as well as the protracted process of securing planning law and permits where needed.

**Key factors for success** were the appreciation of riverscapes as an important contribution to strengthening soft location factors; preparation of a framework plan; the close cooperation of administration departments and of administrations and stakeholders; the cooperation with various partners linking projects and concepts with one another to foster involvement in the projects of others; as well as the obvious benefits for citizens.



*Realised project: cornice along "Verbindungskanal" (©Daniel Lukac)*



*Upcoming project: spawning places for fish on the Neckar (©Municipality of Mannheim / IUS)*



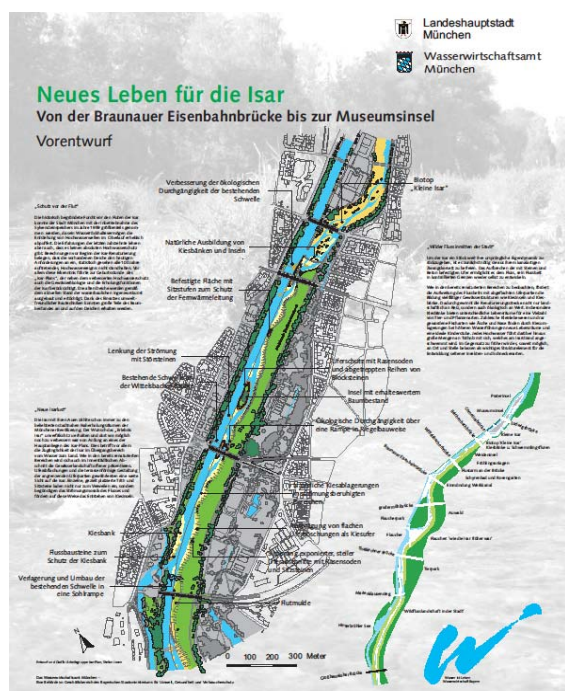
## Project 12 – River Isar: Isar-Plan

**Location:** Munich, Bavaria / Germany

**Investor/executing organisation:** City of Munich, State of Bavaria (Bavarian Water Management Agency)

**Timeline/Status:** begun in 1995, completion planned by 2011

**Extent:** 8 km section of the Isar River



*The preliminary draft (©Bavarian Water Management Agency and the Municipality of Munich)*

**Short description:** Before its regulation in the nineteenth century the Isar flowed in a constantly changing bed with extensive gravel banks and river branches. In the early twentieth century the Isar was fixed in a river bed with trapezoidal cross-section. Due to the utilisation of hydropower and the construction of a reservoir in the upper course, the river lost its dynamics.

In the project the main channel was widened from the southern city border to the inner city wherever possible. The paved embankments were replaced with flat sloping banks. Water and bedload dynamics are encouraged. Low weirs and cross-river sills have been replaced with flat ramps. In parts of the inner city classic waterway construction measures with pavements and built structures were necessary.

**Basic idea:** The basic idea was to secure and improve flood protection. At a very early stage improvements in the ecological conditions and safeguarding of the site as an important recreation area became issues as well.

### Aims of the project

- **ecological:** improving the ecological conditions, restoring permeability for aquatic animals, creating and linking habitats, increasing the residual water and supporting the river's dynamic development
- **economic:** flood protection
- **social:** enhancing the recreational value, enabling people to experience the river space
- **planning/urban development:** aligning the town and river scenery

**Main goal:** In the beginning the project was mainly focused on improving flood protection.

**Initiative / “the driving force”:** Flooding in Bavaria raised awareness of the necessity to pursue active flood protection. In 1995 the interdisciplinary working group “Isar-Plan” was established by the Bavarian Water Management Agency and the City of Munich.

**The planning and implementation process:** Concepts of integrated urban river development first emerged in the 1980s. In 1988 the city council decided to develop basic solutions for river development. Preliminary plans were drafted in 1991. In 1995 the interdisciplinary working group “Isar-Plan” was created. Rather than bringing together staff members of the administrative institutions involved, the decision-makers themselves met regularly and thus were able to take decisions at short notice. Three alternatives were worked out. In 2000 the city council selected the most comprehensive one, which involved substantial changes and simultaneously best fulfilled the goals of flood protection, ecological and recreational upgrading. Planning and implementation was realised in seven construction sections. Due to various restrictions and demands, a competition was organised for the inner city sections. As the winner's concept was not accepted by the public a public participation procedure was arranged. Eventually a solution was reached in a mediation process. Construction of the first model stretches occurred in 2000. Seven of the eight kilometres have already been completed, some sections of the inner-city stretch are still in progress.



*The Isar is characterised by pronounced dynamics. Every flood causes bedload shifts in the river that are now left to run their course. (©Municipality of Stuttgart).*

**Implementation:** In the southern sections the Isar has undergone substantial change; the main channel has been widened. The embankments were replaced with flat sloping banks that are allowed to develop dynamically. Low weirs and cross-river sills were replaced with flat ramps. Deadwood of tree trunks and rootstocks encourage the development of manifold structures. To save a significant tree population on the flood dykes, they were partly armed with a diaphragm wall; partly new dykes were built in front of the old ones. Classic waterway construction measures were required in some parts of the inner city in order to protect technical infrastructure.

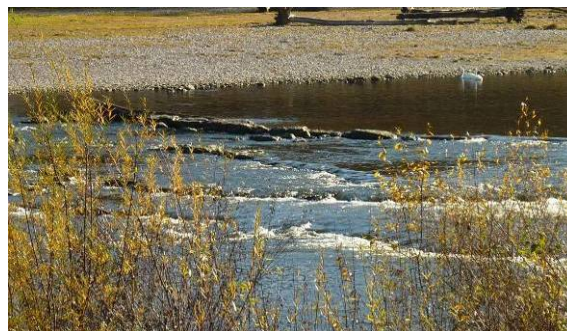
**Maintenance:** Maintenance is the responsibility of the City of Munich. The State of Bavaria contributes to the maintenance costs. Maintenance includes steering and repairing flood damage that goes beyond the acceptable extent.

**Public participation:** Based on a city council decision in 1989 the public was informed about the plans and allowed to bring in their concerns. In 1995 and in 2007 an opinion survey was conducted. An accompanying expert committee was established as an instrument for conducting discussions with the affected district councils and stakeholders. Citizens were informed in several meetings. For the inner city stretches a public involvement procedure and a mediation process was arranged.

**Financing:** The costs for the total project amounted to 28 million Euro. The State of Bavaria contributed a share of 55%, the City of Munich a share of 45%. The land was already in possession of the executive organisations.

**Analysis:** A holistic approach was pursued integrating social, ecological, and economic issues. All goals were met. The planning process was based on close cooperation of administration departments and stakeholders. The area is very popular among citizens and adds to the recreation areas and open spaces as well as to the city's green axes.

**The most difficult obstacles:** In the inner city the resistance of the public to the competition winner's concept caused a delay in implementation. Contaminated sites led to an increase in costs.



*Cross-river sills were replaced by flat ramps with stone rock. (©Municipality of Stuttgart).*

**Key factors for success:** There was enough space to implement comprehensive measures and the land was in the possession of the executive organisations. The strong budgetary situation of the City of Munich at the times was very crucial. Other key factors were the close cooperation between the City of Munich and the Bavarian Water Management Agency and within the work group Isar-Plan (composed of decision-makers), public support as well as the construction supervision on ecological issues and a good construction firm.



*The "Willow Island": close to the inner city some trees formerly situated on the foreland were saved by building an island (©Municipality of Stuttgart)*



## Project 13 – Mill stream Pleißemühlgraben

**Location:** Leipzig, Saxony / Germany

**Investor/executing organisation:** City of Leipzig, Department of Urban Green Areas and Watercourses

**Timeline/Status:** start in 1992, in progress

**Extent:** 2.89 km section of the mill stream

**Short description:** The mill stream Pleißemühlgraben has a total length of 3.74 km and is completely located in the administrative area of the City of Leipzig. In its course from the branch at the weir Pleißewehr Connewitz, in the south, to the north where it leads into the Parthe River, the Pleißemühlgraben is predominantly surrounded by riparian buildings as well as by through roads and service roads. The mill stream is surrounded by green spaces for one-quarter of its length. Despite multiple weirs, the mill stream Pleißemühlgraben is mostly passable for fishes and other aquatic organisms due to the weirs' design. In the 1950s, 2.98 km of the Pleißemühlgraben were culverted and 584 m were filled in because of unacceptable water pollution. The measures for the opening of the mill stream date back to citizen's engagement in the late 1980s. Between 1996 and 2007 the first seven construction sections were completed.



*Opened Pleißemühlgraben with water playground and pedestrian bridge (© Linda Bigga)*

**Basic idea:** The idea of the project is the opening of the Pleißemühlgraben as part of Leipzig's water network.

### Aims of the project

- **ecological:** The aims of the European Water Framework Directive are taken into account during the planning and implementation processes.
- **economic:** The value of central residential and business areas will be increased by the revitalisation. Opening the watercourse is an important element of the Water Tourism Concept of the Leipzig Region and contributes to the improvement of city marketing.

- **social:** The revitalised mill stream provides residents with open spaces for recreation, leisure, and sports as well as, above all, better access to the water. Furthermore, environmental education opportunities are provided by the involvement of educational institutions, associations, and citizens during the implementation process and beyond.
- **planning/urban development:** The urban development aim is to combine historically significant structures (e.g. side walls, steps) and modern components (e.g. railings, illumination). The mill stream Pleißemühlgraben is part of Leipzig's flood protection concept.

**Main goal:** The project mainly aims to improve the urban design's value and enhance the water network as the basis for the Water Tourism Concept of the Leipzig Region.

**Initiative / "the driving force":** The starting point was the Pleißemarsch, a demonstration that aimed to call attention to the pollution of the environment, especially of the Pleiße River, in 1988 and 1989. In 1990, the campaign "Bring the Pleiße into the Light" succeeded. During this campaign, small fires were set along two kilometres of the culverted mill stream. The campaign led to discussions in the city parliament, and finally, in 1992, it was decided that the stream would be opened. The planning and the implementation are of the responsibility of the City of Leipzig, particularly of the Department of Urban Green Areas and Watercourses. The municipality has been supported by the association "Förderverein Neue Ufer e.V." which was founded in 1996.

**The planning and implementation process:** One of the principal conditions for the project was the improvement of the Pleißemühlgraben's water quality from class IV in 1990 to II-III in 1995. In 1994, the city council of Leipzig approved the framework plan for the opening of the mill stream Pleißemühlgraben.

**Implementation:** The first construction section along the street Wundtstraße, with a length of 233 m, was started in 1996 and completed in 1998. The construction sections two and three between the streets Rudolphstraße and Gottschedstraße, with lengths of 104 m and 296 m respectively, were started in 1997 and completed in 1999.



*The shore Mendelssohnufer consists of five steps and cubes allegorising lines of the first staves of Mendelssohn's Violin Concerto in E minor (© Linda Bigga).*

In 1999, the fourth construction section between the streets Wächterstraße and Karl-Tauchnitz-Straße with a length of 95 m was started. At the same time, the revitalisation of the neighbouring green space Fritz-von-Harck-Anlage began. Both the construction section and green space were inaugurated in 2000. In 2001, the water roller at the weir Nonnenmühlwehr (near the Fritz-von-Harck-Anlage mentioned above) and the swimming gardens near the street Otto-Schill-Straße were inaugurated.

The fifth construction section at the square Simsonplatz with a length of 140 m was implemented in 2001 and 2002.

The eighth construction section between the streets Wundtstraße and Paul-Grüner-Straße, with a length of 146 m, was started in 2004. The municipality acquired a part of a private property for construction of a riparian footpath. This construction section was completed in 2006.

Also in 2006, construction of the sixth section, with a length of 78 m, at the shore Mendelssohnufer (between the streets Harkortstraße und Mozartstraße) began. It was completed in 2007.

Construction operations to open another section, which is situated along Dittrichring Street, are scheduled to begin in 2012.

**Maintenance:** The Department of Urban Green Areas, Section Water and Land Management is responsible for maintenance of the site.

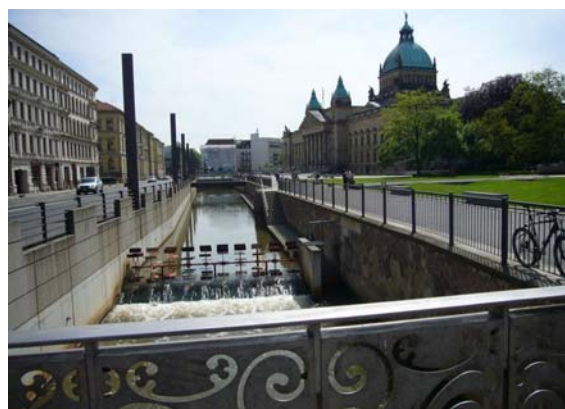
**Public participation:** The association “Förderverein Neue Ufer e.V.” supports the City of Leipzig and informs all interested parties with regular newsletters about the project’s progress. Information and discussion evenings with panel discussions and short presentations about the topic “Leipzig’s watercourses”

provide the public with opportunities to read up on the project and to make their own proposals. Public dedication ceremonies call attention to the progress of the construction sections, while public interest is aroused by the connections made between the arts and the watercourses.

The school and university competition within the planning process in the context of the eighth construction section was based on a pedagogical-didactical concept for environmental education and environmental communication. Furthermore, the public involvement is supported by competitions and workshops for residents.

**Financing:** The costs of the 1,100 m which were opened by 2007 were about 9.5 million Euro.

Each of the construction sections implemented so far was financed to one-third by the City of Leipzig, one-third through subsidies from the Free State of Saxony, the German Environmental Foundation (Deutsche Bundesstiftung Umwelt) and the Allianz Foundation for Sustainability (Allianz Umweltstiftung), and one-third by private riparian owners.



*Water roller at the weir Nonnenmühlwehr and green space Fritz-von-Harck-Anlage (© Linda Bigga)*

**The most difficult obstacles:** In the beginning, riparian owners had reservations about the opening of the Pleißemühlgraben because they were afraid of disagreeable phenomena such as odours and midges. However, these concerns have been dispelled and the revitalised open spaces are well accepted.

**Key factors for success:** The financial arrangement for splitting funding responsibilities among various partners has proven to be a key factor for success. Another important factor in promoting the project was the fact that the initiative began with the engagement of citizens and local associations.



## Project 14 – Stream Weidigtbach

**Location:** Dresden, Saxony/Germany

**Investor/executing organisation:** City of Dresden, Environment Office;  
Residential Building Cooperative Eisenbahner-Wohnungsbaugenossenschaft Dresden eG (EWG)

**Timeline/Status:** start in 2001, completion in 2014 at the earliest

**Extent:** 3.3 km section of the Weidigtbach

**Short description:** The stream Weidigtbach has a total length of 4.6 km. From the avenue Ockerwitzer Allee to the beginning of the street Schlehenstraße, the Weidigtbach is encircled by farmland. From the street Schlehenstraße to the inflow of the stream Gorbitzbach, it is mainly surrounded by a residential area and is almost parallel to the federal road B 173 and the adjacent tramway line.



*Renaturalised Weidigtbach (© Linda Bigga)*

Revitalisation is based on the feasibility study “Machbarkeitsstudie zur Renaturierung des Weidigtbachs zwischen Dresden-Gompitz und Dresden-Cotta” conducted by Stowasser et al. in 1999 on behalf of the Environmental Office of the City of Dresden. According to the stream’s structural quality and current use, the Weidigtbach has been divided into eighteen sections, starting at the inflow of the stream Gorbitzbach and proceeding to Dresden-Altgompitz. The first fifteen sections are to be considered here.

The new river bed and the shores have been stabilised using biological construction methods in order to achieve a natural development of the stream. The preservation of existing route connections requires the construction of ecologically passable hydraulic structures where streets, footpaths, and lines cross the Weidigtbach.

**Basic idea:** The main idea of the revitalisation is to implement the European Water Framework Directive, including opening of the stream and increasing the quality of life in the neighbourhood around the Weidigtbach, and at the same time making the stream a true experience.

### Aims of the project

- **ecological:** The aim is a nature-oriented revitalisation of the stream Weidigtbach, including passability for flora and fauna, in keeping with the European Water Framework Directive.
- **economic:** Among other goals, the revitalisation aims to save rainwater fees and reduce maintenance costs for the City of Dresden by using biological construction methods.
- **social:** The quality of life increases due to the revitalisation of the stream. Open spaces for leisure activities are provided in connection with the partial removal of former parking spaces.
- **planning/urban development:** Flood protection is improved due to construction of a flood detention basin and additional flood channels along the stream. In addition, revitalisation aims to ameliorate the landscape design and increase the value of the residential area Kräutersiedlung by installing alternative rainwater management.

**Main goal:** The revitalisation mainly aims to return the Weidigtbach and its riparian neighbourhood to a nature-oriented status, thus increasing the value of the residential environment and improving flood protection.

**Initiative / “the driving force”:** The initiator was the Environmental Office of the City of Dresden. The residential building cooperative Eisenbahner-Wohnungsbaugenossenschaft Dresden eG (EWG) has since joined the initiative and supports the municipality by undertaking coordination tasks and acquiring subsidy funding.

**The planning and implementation process:** The planning process for the sections one to four and ten to fifteen including design planning, approval planning, approval of the plans and implementation planning took from 2000 to 2009. The flood detention basin (section five) has been in preliminary planning since 2007. The planning process for the green space Weidigtbachpark in section six including design planning, approval planning, and implementation planning took, with interruptions, from 2000 to 2007. For the opening of the Weidigtbach between the tram stop Schlehenstraße and the cemetery of Cotta (sections six to eight), design and approval planning took from 2000 to 2010. The planning process for section nine included design planning, approval planning, and implementation planning of the

renaturation in the reference section Schlehenstraße and of the water playground NaturSpielRaum. This took from 2000 to 2005 for the renaturation and from 2004 to 2005 for the water playground.

Land acquisition was not necessary. The Residential Building Cooperative EWG owns the land where the culverted stream flows. After the opening, it will be acquired by the City of Dresden.



*Water playground NaturSpielRaum (© EWG)*

**Implementation:** In 2000 and 2001, former parking spaces were transformed and a 200 m long section of the Weidigtbach near the street Schlehenstraße was renaturalised. From 2004 to 2005, the stream was renaturalised behind the street Reuningstraße and the water playground NaturSpielRaum was constructed (all section nine). From 2007 to 2008, the green space Weidigtbachpark was created (section six). Beginning in 2009, the remaining sections of the stream Weidigtbach are to be opened and renaturalised. The whole revitalisation will be completed in 2014 at the earliest.

**Public participation:** In context of the residential area Kräutersiedlung, there was first an urban development competition about the whole concept and then an architectural competition. An open council is expected to take place during further steps in the planning process.

**Financing:** The costs for the measures implemented so far are about 1.9 million Euro. For the remaining implementation, costs are expected to be about 5 million Euro.

Different sections of the revitalisation have been compensation measures for the construction of the state road B 173, the tramway line to Gompitz and a supermarket. So far, the revitalisation has been partly financed by the City of Dresden (within the framework of the living environment programme and other programmes), the Dresden Transport Corporation (DVB), the wastewater service provider Dresden Stadtentwässerung, the Road Construction Office Meißen-Dresden and with urban development grants from the federal government and the Free State of Saxony.



*Weidigtbachpark on a former brownfield (© EWG)*

**The most difficult obstacles:** Opening the Weidigtbach proved to be difficult and very expensive at some special sites. Such sites include a tramway stop, a pedestrian underpass, and under other special conditions, e.g. where the culverted stream lies far below the surface or where non-removable infrastructure has been built on top of the former river bed after the stream was culverted.

**Key factors for success:** On the one hand, revitalisation of the Weidigtbach has been promoted by pressure due to the European Water Framework Directive. On the other hand, a key factor was the supportive and open-minded response of the residential building cooperative EWG, which joined the revitalisation initiative and has taken on different tasks, such as acquisition of subsidy funding. The main factor for success continues to be the good cooperation between the Environment Office of the City of Dresden and EWG.

## Project 15 – Parthe River: Parthenaue

**Location:** Leipzig, Saxony / Germany

**Investor/executing organisation:** Zweckverband Parthenaue

**Timeline/Status:** start in 1992, in progress

**Extent:** area of over 80 km<sup>2</sup> along the Parthe River (56.7 km long)

**Short description:** After the fall of the Iron Curtain rapid economic development set off in the area northeast of Leipzig. The Zweckverband Parthenaue was founded (the members are six local authorities, including the City of Leipzig and the Leipzig county) in order to preserve the area from increasing economic and private use. The measures realised include:

- Renaturalisation of the “Rüdgengraben“ near Plaußig with over 2 km of hedges and wetlands
- Renaturalisation of the former landfill “Sehlsis” including cultivation of shrubs and wetlands
- Transformation of the city park Taucha into a country park
- Revitalisation at the Wachberg near Taucha, which covers over 2 ha, including cultivation of an extensive field
- Greenbelt setting with rows of fruit trees and wild trees over a distance of 16.5 km and hedges over a distance of 4.6 km, situated east of Taucha
- Ecological forest conversion covering over 28 ha of land

**Basic idea:** The association’s aims include: protecting the area against building development, nature and landscape conservation, ecological and flood protection of water, and providing recreational opportunities. All of these goals are pursued not only by promoting preservation but also via different strategies like environmental education or publicity through art projects.

### Aims of the project

- **ecological:** The association cultivates and revitalises habitats, including 130 km of running waters in the catchment of the lower Parthe that are cultivated in a joint effort according to ecological criteria.
- **social:** The association offers educational programmes for classes and other groups of citizens or tourists to increase knowledge of and awareness about flora and fauna and their protection.
- **planning/urban development:** A water development plan has been prepared and the digital water management, based on the geographical information system ArcView, has been applied.

**Main goal:** The main goal is to combine water and landscape conservation schemes with elaborated planning approaches.

**Initiative / “the driving force”:** After the local authorities founded the association, most of the work was done by volunteers. When the work load became excessive, the association hired one of the volunteers as its CEO. This CEO is the driving force and initiator of most of the activities with respect to the Parthe River renaturalisation measures.



*Overgrown part of the Parthe River (© www.zv-parthenaue.de)*

**The planning and implementation process:** Land acquisition was not necessary because the area under consideration is in the responsibility of the local authorities involved. Those authorities decide over the activities to be taken or hand the decision-making power over to the Zweckverband Parthenaue.

**Implementation:** Since the founding of the Zweckverband, individual projects of differing size and duration have been implemented.

**Maintenance:** Maintenance of the sites is the responsibility of the respective local authorities.

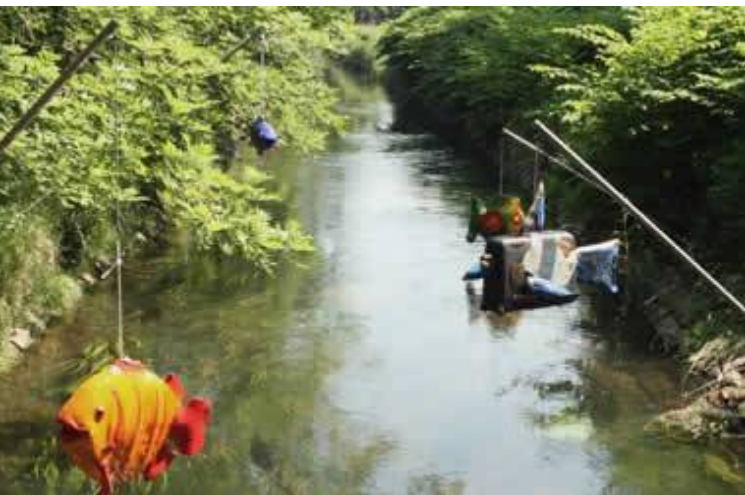


**Public participation:** The conservation and renaturalisation tasks are fulfilled by the responsible bodies. The public is addressed through a number of initiatives (excursions on the river as well as on nature trails, exhibitions on riparian forests and waters, nature conservation work with children, slide shows, art workshops, art exhibitions along the waterbodies, and adjacent parks, etc).

**Financing:** The costs cannot be specified because the work consists of different segments conducted at different times and financed from varying sources.

**The most difficult obstacles:** If at all, scarcity of time and personal as well as financial resources were hindering factors but did not prevent realisation of specific initiatives.

**Key factors for success:** To achieve its tasks and to reach the local as well as supra-regional public, the association works on a wide range of projects: The combined approach, that involves digital water management, preservation following water development plans, exhibitions and slide shows, guided tours, nature trails, as well as bicycle routes to art projects are the key to the success of the association's work. Each of the initiatives would have worked individually, but together they have contributed to developing a new and sustainable identity for the area that is shaped by the river and its natural heritage.



*Parthe art work "Flying fish" (© [www.zv-parthenaue.de](http://www.zv-parthenaue.de))*



*Light installation at the Parthe in Leipzig (© Heinz-Jürgen Böhme)*



## Project 16a – Kaitzbach River: Project “Wasserkultur”

**Location:** Dresden, Saxony / Germany

**Investor/executing organisation:** BMBF (Federal Ministry of Education and Research),  
Project Ökoprojekt Elberaum

**Timeline/Status:** 1994-1997

**Extent:** River Kaitzbach (11.92 km )

**Short description:** Most parts of the stream Kaitzbach are located in the administrative area of the City of Dresden. Since the nineteenth century, the Kaitzbachgrund, the area around the stream, has become a very popular recreation site. From the 1950s till 1989, the area was a dump for radioactive contaminated waste from the Wismut uranium processing plant in Coschütz/Gittersee. In the 1990s, the municipality of Dresden had to clean up the Kaitzbach and a nearby lake, Carolasee, located in the “Großen Garten”, which had been contaminated as sludge ponds.

**Basic idea:** The basic idea of the project was to increase public awareness with respect to the Kaitzbach and improve local identification with the Kaitzbach through several cooperative projects involving ecological, urban development, social or artistic aspects.

### Aims of the project

- **ecological:** The ecological aim was to enhance water protection by initiating, for example, youth projects focussed on ecological concerns.
- **social:** Increasing residents’ awareness of the Kaitzbach.
- **planning/urban development:** The planning aim of the project was to encourage water development and to improve urban watercourses to better integrate them into the city and encourage residents to perceive them as a benefit.

**Initiative / “the driving force”:** Project “Wasserkultur” was a nationwide project with project partners from Frankfurt/Main, Dresden and Kassel and funding from the Federal Ministry of Education and Research. One part of the project, called “Teilprojekt Dresden”, was initiated by Ökoprojekt Elberaum and its employee Frank Frenzel, who coordinates all projects.

**Public participation:** The project started with a short survey of local stakeholders to obtain an overview of stakeholders, problems, and needs for action. After 1994, the project initiated monthly excursions along the Kaitzbach. In 1995, an excursion guide was published, which immediately sold out.

During the project, several exhibitions in schools and public buildings were presented. Other public events include: stakeholder excursions on the site (school classes, students, scientific institutes), video workshops with young people from the district, workshops with local stakeholders and students’ competitions.

**Financing:** Project “Wasserkultur” was a nationwide project with project partners from Frankfurt/Main, Dresden and Kassel, whose work was financed by the Federal Ministry of Education and Research. The costs cannot be specified because the work consisted of different parts conducted at different times and financed from varying sources.



*A path was developed alongside the Kaitzbach  
(© Karin Lange)*

**Analysis:** Even thirteen years after the end of the project, the excursion along the Kaitzbach is still conducted twice a year. The artistic association “Dresdner Sezession ’89 e.V.” initiated the “Wasserkunstweg Mnemosyne” and still organises art events along the stream. The project Wasserkultur shows that several projects have had a sustainable effect, because even ten years after the completion of the project, the concept behind it is still in people’s minds.

**The most difficult obstacles:** The city council of Dresden did not seem to be very interested in the project Wasserkultur. But district advisory boards took part in public discussions and project events.



*Sculpture „Innere Mitte”, part of “Wasserkunstweg Mnesmosyne” along the Kaitzbach (© Karin Lange)*

**Key factors for success:** The cooperation with associations, local stakeholders, and foundations was beneficial because it fostered dissemination and communication with the public.

The combined approach with ecological and social projects such as exhibitions, slide shows, guided tours nature trails, as well as bicycle routes and art projects are the key to the success of the project's work. During the project, a Kaitzbach network was founded. All these initiatives together increased public awareness for urban rivers.

Another key factor for success was the city council's decision that whenever inner city renewal plans were drafted, the reopening of culverted parts of the Kaitzbach would be considered.



*Kaitzbach near Hugo Bürkner Park in Dresden (© Karin Lange)*



## Project 16b – Kaitzbach: Hugo Bürkner Park

**Location:** Dresden, Saxony / Germany

**Investor/executing organisation:** Municipality of Dresden, Environmental Office

**Timeline/Status:** 2005-2006

**Extent:** about 200 m section of the Kaitzbach

**Short description:** Most parts of the stream Kaitzbach are located in the administrative area of the City of Dresden, mainly in the centre of the city. Since the nineteenth century, the Kaitzbachgrund has become a very popular recreation area. From the 1950s till 1989, the area around the stream was a dump for radioactive contaminated waste from the Wismut uranium processing plant in Coschütz/Gittersee. In the 1990s, the municipality of Dresden had to clean up contaminated sludge in the Kaitzbach.

The Kaitzbach has an average flow rate of 35 litres per second. During the flood in 2002, the average flow rate was 2000 litres per second. In the districts around the Kaitzbach flood damage repairs for buildings, infrastructure and waterbodies cost 3 million Euro. After the great flood in 2002, the municipality of Dresden was forced to initiate several flood protection measures. One idea was to enlarge the flood detention basin in Hugo Bürkner Park.

**Basic idea:** Transformation of the Hugo Bürkner Park into a green recreation area around the Kaitzbach that can also be used as a detention basin.

### Aims of the project

- **ecological:** The aim was to combine flood water protection zones and semi-natural revitalisation of the Kaitzbach, including passability for flora and fauna in keeping with the European Water Framework Directive.
- **economic:** Realise flood protection for the Dresden city centre to avoid flood damage
- **social:** The quality of life increases due to the revitalisation of the Kaitzbach. Open spaces for leisure activities like the Kaitzbachweg and art sculptures along the stream were to be created.
- **planning/urban development:** The planning aim was to improve flood protection by enlarging the flood detention basin Hugo Bürkner Park. Furthermore, the Kaitzbach should become part of a recreation area.

**Main goal:** The main goals of the project were the improvement of flood protection in the Hugo Bürkner Park by enlarging the detention basin from 11,000m<sup>3</sup> to 20,000m<sup>3</sup> and revitalisation of the park space into an urban recreation area.



*Sculptures "Parkmöbel", Hugo Bürkner Park Dresden  
[http://de.wikipedia.org/wiki/Hochwasserschutz\\_in\\_Dresden](http://de.wikipedia.org/wiki/Hochwasserschutz_in_Dresden)*

**Initiative / "the driving force":** The initiator of the project was the Environment Office of the City of Dresden.

**Implementation:** The implementation started in November 2005 and was completed in May 2006.

**Maintenance:** The Environmental Office of the City of Dresden is responsible for maintenance of the stream.

**Public participation:** Public participation included several presentations of the project.

**Financing:** The cost for the measures, implemented between 2005 and 2006, was about 280,500 Euro.

**Analysis:** Flood protection for the inner city of Dresden was improved and after several years the area around the Kaitzbach again became a popular recreation area.

**Key factors for success**

The key factor for success was the combined approach including flood protection improvement by enlarging the detention basin Hugo Bürkner Park and revitalisation of a neglected park to create an urban recreation area.



---

## Analysis

Comparison of the various projects reveals some similar obstacles and universal key factors for success that can be summarised with the catchwords “people – money – land”.

### People

A very important factor for success that is evident in all of the best practice projects presented is good cooperation between the different stakeholders involved. Good cooperation based on confidence and mutual understanding is very helpful, both among administrative departments, on the one side, and among administration representatives and the different stakeholders, on the other side. Good cooperation can help to find solutions that are supported by all persons involved and thus accelerate the planning and implementation process. In comparison to big cities, administrations in smaller towns can benefit from “short communication channels” and more flexibility.

The planning and implementation process can be considerably eased and expedited if the responsible institution, in these cases generally the municipality, is supported by civic associations and the public who can put pressure on local politicians. In recent decades, appreciation for and awareness of ecological demands in general as well as recognition of rivers’ importance as “lifelines” has risen and now contribute to activating public support.

Furthermore, projects can attract considerable attention, if:

- the river or stream flows through the city centre, like the Pleißemühlgraben, the Neckar in Villingen-Schwenningen and the Neckar in Stuttgart,
- the project offers additional recreational or educational functions like the Weidigtbach or the projects that were realised in the context of a state garden show, and if
- nature protection measures are combined with art projects as in the cases of the Parthenaue and the Kaitzbach.

In addition, economic incentives can foster local stakeholders’ support for a project like, for example, reduced rainwater fees. This has been the case for the Weidigtbach project.

As there are often numerous obstacles to overcome, tenacity and staying power are essential traits in those responsible for implementing the project. Competent partners in planning and implementation are a key factor as well because they ensure the ecological goals will be met.

### Money

Although revitalisation projects, so-called green infrastructure projects, cost only a fraction of grey infrastructure, the funds needed are difficult to raise. If the project is not preceded by catastrophes, which result in public funding, acquiring sufficient financial resources is usually quite difficult.

A successful strategy is to tap as many sources as possible. Subsidies are provided for various measures, such as flood protection, improvement of ecological conditions, realisation of state garden shows, city remediation projects or EU projects. A good knowledge of the possibilities is required.

Implementation in the context of an impact mitigation regulation helps to reduce the need for budgetary funding. As some examples on the Neckar show, costs can be shared with the help of cooperative efforts: in these cases the community collaborated with the water management authority.

Moreover, the more the public appreciates and supports revitalisation projects, the more willing politicians will be to provide budget money. Therefore, raising awareness is also a key factor in securing sufficient financial support.

## Land

Another difficulty is the availability of land if it is not in the possession of the executive organisations. Far-sighted land acquisition enabled some communities to implement revitalisation projects on land in their own possession. If land has to be purchased, close cooperation with farmers and landowners became a factor for success, a further example of the importance of the catchword “people”. Projects which add to a community’s eco-account spare future land requirements by mitigation measures and thus help to convince farmers.

Besides these key factors for success, there are some additional factors that support revitalisation projects:

In some projects, the need for flood protection or improvements in flood protection achieved by revitalisation measures turned out to be either the starting point or a very helpful argument in convincing politicians or the public. This was the case, for example, on the Isar and the Schutter in southern Germany. The flood in 2002 was the starting point for the development of the combined flood detention basin and recreation area Hugo Bürkner Park in connection with the Kaitzbach in eastern Germany.

Ecological and social issues can often be addressed simultaneously. At the Neckar, the need for bank remediation fosters comprehensive solutions.

Legal requirements such as the EU Water Framework Directive and the commitment of the superior administration or political levels to revitalisation projects can help to convince local politicians and raise public awareness.

Some of the projects were part of superior planning such as river-related concepts or preliminary framework plans. This put the project in an overall context and thus helped to convince the decision-makers, to raise public awareness and to be prepared for realisation.

Another framework which helped either to obtain land or funding or accelerated the planning process was implementation of a project in the context of a state garden show.

Positive public perception and favourable media coverage are also very useful. Therefore, public relations efforts can help to raise awareness and perhaps explain unpopular measures such as tree felling. Positive public perception can also be achieved by implementing model stretches, seeding flowering meadows and establishing areas for recreation or the like.

*Table 1.2-7: The most difficult obstacles and key factors for success observed in Germany (© City of Stuttgart, University of Leipzig).*

<b>The most difficult obstacles</b>	<b>Key factors for success</b>
<ul style="list-style-type: none"> <li>• Lack of financial resources</li> <li>• Land acquisition / land availability</li> <li>• Lack of public awareness and support</li> <li>• Speculation on land prices</li> <li>• Existing infrastructure</li> <li>• Lack of cooperation</li> <li>• Contaminated sites</li> <li>• Unclear structures and areas of competences within administrations</li> <li>• Only few competent planning offices</li> </ul>	<ul style="list-style-type: none"> <li>• Close cooperation of organisations/persons involved</li> <li>• Raising awareness to obtain public support</li> <li>• Tenacity and staying power of the executive organisation/specific persons</li> <li>• Competent partners (firms) for planning and implementation</li> <li>• Commitment of superior administration or political levels</li> <li>• Projects as part of superior plannings/concepts</li> <li>• Tapping various funding sources, financing from mitigation fees</li> <li>• Land in the possession of the executive organisation</li> <li>• Cooperation with owners/ farmers to obtain the land needed</li> </ul>

---

## Recommendations

### Planning strategy

- Put the planned project in a superior context, which helps to promote the project and helps to raise public awareness.
- Build model stretches in order to convince people and decision-makers.
- Create attractive measures such as flowering meadows in order to foster public support.
- Combine revitalisation measures with other projects/activities/goals to promote acceptance.
- Combine flood protection measures and measures to enhance retention capacity with revitalisation measures (multifunctionary orientation of the projects).
- Be tenacious and develop staying power.
- Develop a pragmatic approach and use every opportunity to realise even only small sections.
- Have drafts prepared in advance to be able to present or start the project at short notice.
- Promote the goal you think will convince public and decision-makers most, even if you have other main goals in mind.

### Cooperation

- Cooperate closely with all organisations / departments involved.
- Set up interdisciplinary project teams with representatives who can take decisions at short notice.
- Define the competence of each different department in advance.
- Find allies / partners to cooperate in planning and implementation.

### Financing

- Split the necessary budget into multiple parts and find funders for them. It is more probable that you will acquire financial support from multiple sources than from a single source that allocates a huge amount.
- Obtain information on possible grants from various sources.
- Use impact mitigation regulation / impact mitigation fees to finance revitalisation projects.

### Land acquisition

- Practice far-sighted land acquisition.
- Find creative solutions in consensus with owners and farmers to acquire the land needed (land exchange; realignment and consolidation of agricultural land holdings that serves the farmers; adding the measure to the eco-account to spare future land requirements; splitting the impact of the land requirement among several farmers instead of affecting only one farmer whose existence could be threatened).
- Try to implement sustainable land-use in the floodplain in cooperation with farmers (and spare maintenance costs in the process).

---

## Information, Participation and Public Relations Activities

- Involve stakeholders. This can help to find solutions that are supported by all persons involved and thus can accelerate the planning and implementation process.
- Inform and involve the public in the planning and implementation process. Public awareness and support can help to put pressure on decision-makers and facilitate project approval. Fears can be dispelled.
- Work for positive media coverage and positive public perceptions of the project. This facilitated acquisition of financial resources.
- Check for possibilities of combining revitalisation activities as such and accompanying measures that can indirectly foster and support the revitalisation idea in some way. Promote the project and its benefits by staging events, feasts, ground-breaking ceremonies, guided tours, leaflets, press relations, exhibitions, display boards, etc.
- If unpopular measures have to be taken, explain them in advance (e.g. tree felling).

## Implementation

- Supervise construction with respect to ecological issues to make sure goals are met.
- Ensure that surveys of the project area are thorough, appropriate and qualified.

## Summary

Overall, sixteen projects were analysed and evaluated in Germany. The Municipality of Stuttgart (southern Germany) and the University of Leipzig (East Germany) followed different approaches:

The REURIS support group Stuttgart compiled a list of thirty revitalisation projects in Baden-Württemberg from numerous best practice examples that are well-known and appreciated by experts in the field. Twelve projects were chosen to be analysed in detail. The choice aimed at depicting a wide range of projects dealing with specific problems in order to learn from the differences in approach, implementation and financing. The data were collected during visits to the sites, interviews with persons responsible for project realisation, evaluation of plans, photos, brochures and press articles, literature research, and research on the internet. The interviews followed a questionnaire that was developed for the purpose of this study. Analysis and evaluation followed common assessment criteria focusing on issues that promote or impede project development, most difficult obstacles and key factors for success.

Criteria for best practices selection by the University of Leipzig were (a) private involvement in financing a revitalisation project and (b) among others factors, public acceptance of the initiatives, public acceptance of the project, and exemplary planning and realisation of the project. As a result of Saxony-wide research, four best practices were chosen: The mill stream Pleißmühlgraben in Leipzig and the stream Weidigtbach in Dresden because of the particular financing tools applied, the Parthenaue near Taucha and the Kaitzbach mainly for the other above named criteria.

The best practices in Germany follow economic, ecological, or social goals and serve as good examples especially for the following specific features.

Combining the interests of private or semi-private stakeholders with those of local officials and administrations has been shown to be a sustainable and promising basis for planning and realising revitalisation projects.

Combining mandatory and optional aims with respect to the revitalisation effort increases the basis for support, the number of stakeholders and potential financing sources.

Sustainability of the implemented projects can be increased by enhancing public awareness and support.



Good cooperation based on confidence and mutual understanding between the persons involved is very helpful both among the administrative departments and among the administration and different stakeholders. The process can be facilitated if the public supports the ideas or even puts pressure on local politicians.

A key strategy for success in obtaining funding is to tap as many sources as possible. Subsidies are provided on various issues. A good knowledge of the possibilities is required. Moreover, the more the public appreciates and supports revitalisation projects, the more likely politicians will be willing to provide budget money. Therefore, raising awareness is also a key factor in financing projects

Far-sighted land acquisition enabled some communities to implement revitalisation projects on land in their own possession. If land has to be purchased, close cooperation with farmers and landowners to find common solutions was a factor for success.

---

## 1.2.2 Review

The situation of urban river spaces in Poland, Czech Republic and Germany are in one sense very similar. In the context of industrialisation, rivers and streams were subject to substantial changes and modifications. They were regulated, paved and channelled or even tubed. Areas by the riverside were often used commercially. Industrial zones and technical infrastructure were built in the floodplains.

During the second half of the twentieth century the riverside areas underwent structural changes – industrial zones were abandoned resulting in brownfields and deteriorated open spaces.

Thus, up to the present day urban river spaces suffer from:

- deficits with respect to ecological functions (habitat and biotope network function, permeability / passability, pollution and contamination)
- deficits with respect to social functions (accessibility to the waters, open spaces, low attractiveness and weak perceptibility)
- deficits with respect to spatial functions (segregation between city and river due to technical infrastructure or neglected areas along rivers)

Nowadays, awareness of ecological issues has grown. Nevertheless, there is still a lack of awareness, appreciation and knowledge in all three countries about the manifold benefits of river revitalisation, including the social and economic benefits.

To learn about the state of the art of river revitalisation planning and implementation in the partners' countries and experience in this field, each project partner and country compiled a study about best practices of river revitalisation.

The following provides an overview of the findings and results of the studies.

### Initial situation

The initial situation of rivers and streams in the three countries is very similar. In the past rivers and streams were straightened, paved or tubed in order to gain land for agricultural, residential or industrial use or to provide flood protection. Big rivers were extended and used as waterways; small streams were used for sewage discharge. Along the rivers industrial zones were developed. This often led to a segregation of rivers or streams and towns, to a loss of ecological functions of the flowing waters, lack of attractiveness and difficult access to the rivers. Their potential recreational function was not sufficiently appreciated in the West or the East. In the western European countries revitalisation and renaturation of rivers began in the 1980s whereas in eastern European countries it did not commence until after 1990.

### Goals of the projects

In Poland the focus of revitalisation projects is on social and spatial goals, the elimination of pollution and the creation of riverside recreation areas; ecological improvement of the riverbed structure hardly plays a role.

In Czech Republic the focus lies mainly on flood protection; social, ecological and urban aspects are partly associated with these goals, according to the character and location of the river.

In Germany the pursued goals differ according to the location of the river and the kind of stream or river; in general, ecological, social and spatial goals are today pursued simultaneously in inner city areas, whereas economic aspects are less important, aside from the aspect of flood protection.

---

## Project executing organisation

Cities and communities play a key role as executing organisations for urban revitalisation projects in all three countries. In Poland most of the riverside investments are executed by local self-governments and all of them must be approved by the regional water board authorities. Some projects are realised in cooperation with municipalities, universities or institutes and NGOs. In the Czech Republic, several revitalisation projects were realised by water management authorities; in Germany as well, some projects were realised in cooperation with water management authorities. In some cases, revitalisation projects are realised by communities in cooperation with private companies (e.g. in Dresden). In Poland some projects are realised in cooperation with municipalities, universities or institutes and NGOs. All riverside investments must be approved by the respective regional water board. In Germany projects on the federal waterway Neckar are realised in cooperation with the Federal Water and Shipping Authority.

## Initiative

In most cases the initiative was taken by public authorities / specific representatives of city departments. In some cases active citizens, NGOs or planning offices revealed deficiencies or developed project ideas and thus prompted the public authorities to initiate a project.

## Public participation

(see also Manual Part 2)

There is a lack of common planning and social consensus procedures dedicated to urban river spaces management in all three countries, aside from forms of participation required by law. Information is often provided to the public only at the end of the planning process and only affected people are involved. The involvement of other stakeholders and the public depends on the discretion and the commitment of the executive organisation. Real participation – where people have opportunities to decide - is rarely practiced. Nevertheless, awareness that there is a need to involve the public and stakeholders has risen in all three countries and a gradual transition towards better involvement of public and local stakeholders from the beginning of the projects can be observed – depending on the availability of staff and the necessary financial means.

## Public perception

In all three countries revitalisation projects were generally well accepted by the public after their implementation. This was true even if the projects were controversial during the planning period or there were initial misunderstandings due to insufficient information at the beginning of the project or people's perception that the project goals would not be achieved.

## Most difficult obstacles

All three countries suffer from three main obstacles:

- difficulties in gaining the land and space required for revitalisation measures,
- lack of financial and personnel resources, and
- deficits in cooperation among the departments and organisations involved in revitalisation projects.

Additionally, there is lack of awareness for the manifold benefits of revitalised river spaces and thus a lack of public and political support. It is difficult to convince decision-makers of the positive effects of such areas because very often quantitative data about the manifold non-economic benefits is not available. This

is due to the complexity of the relevant evaluation methods which makes it very time-consuming and cost-intensive to collect the data (see manual Part 3).

In the Czech Republic and Poland conventional technical water course measures are still preferred due to a lack of knowledge, experience and training about trends and possibilities, experience and examples of semi-natural river revitalisation. Additionally, technical measures are cheaper and easier to implement and projects require less land.

In Poland funding programmes for river revitalisation do not support ecological revitalisation measures in urbanised areas. There is also a lack of legislative mechanisms, public private partnership models and local financial mechanisms to support river revitalisation. The databases on catchment areas are fragmentary. Existing statistical data is not compatible and connected with different spheres of city life. There is also a lack of suitable organisational structures within the administrations and a lack of project management methods.

In the Czech Republic town authorities have less possibilities to intervene in the preparation of flood protection projects, since they is the responsibility of other institutions which generally do not support the application of semi-natural approaches and integrated revitalisation principles. Furthermore, the focus in the Czech Republic lies mostly on small streams; big rivers have hardly been revitalised to date.

In Germany bureaucracy and poor cooperation – due to lack of staff and time – is an obstacle. Furthermore, there are only a few planning offices with a high level of competence in river revitalisation, in particular offices which meet the demands of planning for federal waterways.

## Key factors for success

The key factors for success are very similar in Poland Czech Republic and Germany.

- Towns and cities play a key role as initiator and coordinator of revitalisation projects.
- Close cooperation among the persons / departments involved helps to find solutions to complex challenges.

A key factor for success is also the cooperation with competent partners for planning and implementation – both planning offices and construction companies. Supervision construction with respect to ecological aspects helps to meet the intended ecological goals.

Another important key factor for success is the application of integrated planning methods and multifunctional approaches that take ecological, social and spatial aspects into account simultaneously. Visionary approaches and innovative planning and design methods help to find solutions to the complex requirements of river revitalisation projects.

Crucial factors for success are the availability of land and financial resources. A useful solution to the funding problem is to accumulate funds from various sources. In Germany, revitalisation projects are often financed by mitigation fees or implemented as measures within the context of impact mitigation regulation. This option does not exist in Poland and the Czech Republic. Public participation and creative solutions are instrumental in acquiring land.

Each project faces its own challenges and problems. Therefore, the initiative, creativity, commitment, determination and staying power of the executive organisation and pragmatic and visionary approaches as well as long-term and systematic activities are elements that contribute to success. It is very helpful if the project is part of superior planning such as river-related concepts or preliminary framework plans. This situates the project in an overall context and thus can help to promote the project, to convince decision-makers and to raise public awareness.

Public support is a crucial factor for success. Therefore, public and stakeholders' involvement as well as public relations activities (positive media coverage) help to raise public awareness, to foster a shift in the



perception of urban rivers and thus to promote public support. Attracting attention to the rivers by combining revitalisation measures with other projects, goals and activities is a helpful strategy.

In some projects the need for flood protection or improvements in flood protection achieved by revitalisation measures proved to be either the starting point or a very helpful argument in convincing politicians or the public.

Legal requirements such as the EU Water Framework Directive and Flood Directive as well as the commitment of superior administrations or political levels to revitalisation projects can help convince local politicians and raise public awareness.

Table 1.2-8 provides an overview of the studies' approaches and findings. Cooperation, participation and financial issues are handled in detail in parts 2 and 3 of the manual.

Table 1.2-8: Synopsis (© REURIS project team).

Poland		Czech Republic	Germany	
Northern Poland	Southern Poland		Baden-Württemberg/ Bavaria	Saxony
<b>1 Approaches</b>				
<b>Number of projects evaluated</b>				
<ul style="list-style-type: none"> <li>• 43 cities surveyed</li> <li>• 25 projects evaluated</li> <li>• 5 projects described in detail</li> </ul>	<ul style="list-style-type: none"> <li>• 21 projects surveyed</li> <li>• 11 projects evaluated</li> <li>• 3 projects described in detail</li> </ul>	<ul style="list-style-type: none"> <li>• 35 projects evaluated</li> <li>• 12 described in detail</li> </ul>	<ul style="list-style-type: none"> <li>• 12 projects evaluated and described in detail</li> </ul>	<ul style="list-style-type: none"> <li>• 4 projects evaluated and described in detail</li> </ul>
<b>Criteria for selection</b>				
Planning and implementation process: <ul style="list-style-type: none"> <li>• Complexity of the project</li> <li>• Sustainability / integrated approach</li> <li>• Public involvement</li> <li>• Efficiency of use of capital and non-capital sources</li> </ul> Projects' implementation results: <ul style="list-style-type: none"> <li>• Effectiveness</li> <li>• Usefulness</li> </ul>	<ul style="list-style-type: none"> <li>• Location in an urban area</li> <li>• Application of restoration principles (projects with strictly technical flood protection and riverbed measures were omitted).</li> <li>• Multifunctional orientation of the project</li> </ul>	<ul style="list-style-type: none"> <li>• Well-known, appreciated</li> <li>• Successful implementation</li> <li>• Pilot character</li> <li>• Wide range of projects</li> <li>• Innovative methods</li> </ul>	<ul style="list-style-type: none"> <li>• Assessment of good practice by experts</li> <li>• Financial issues, in particular private involvement</li> <li>• Accessibility of the river</li> <li>• Public acceptance</li> <li>• Public relations activities</li> <li>• Exemplary planning and realisation of the project</li> <li>• Comparability to own work</li> </ul>	
<b>Analysis and evaluation criteria</b>				
Statistical method used for comparative assessment: <ul style="list-style-type: none"> <li>• Social attractiveness</li> <li>• Appropriate functions</li> <li>• Visual quality improvement and spatial integration into the urban environment</li> <li>• Ecological regeneration</li> <li>• Technical infrastructure improvement</li> <li>• Economic growth</li> </ul>	<ul style="list-style-type: none"> <li>• Location in an urban area</li> <li>• Presence of restoration principles</li> <li>• Multifunctional orientation of the project (ecological, social, planning and economical benefits, flood protection)</li> <li>• Public acceptance</li> </ul>	<ul style="list-style-type: none"> <li>• Analysis and evaluation based on the interviews and research findings</li> <li>• Focus on issues that promote / impede, most difficult obstacles, key factors for success</li> </ul>	<ul style="list-style-type: none"> <li>• Qualitative case research</li> </ul>	

Poland		Czech Republic	Germany	
Northern Poland	Southern Poland		Baden-Württemberg/ Bavaria	Saxony
<b>2 Selected issues</b>				
<b>Investor / executing organisation</b>				
<ul style="list-style-type: none"> <li>• Mostly town authorities, necessary cooperation with regional water management authorities</li> <li>• Informal committees and associations (municipalities in cooperation with universities and institutes, NGOs, private companies and private persons, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>• Mostly town authorities</li> <li>• In some cases water management authorities</li> <li>• Private construction companies (realisation phase)</li> </ul>	<ul style="list-style-type: none"> <li>• Mostly communities and cities</li> </ul>		
<b>Initiative</b>				
<ul style="list-style-type: none"> <li>• Mostly communities and cities</li> </ul>	<ul style="list-style-type: none"> <li>• Mostly communities and cities</li> <li>• NGOs</li> </ul>	<ul style="list-style-type: none"> <li>• Mostly communities and cities/ individual people in city departments</li> </ul>	<ul style="list-style-type: none"> <li>• mostly communities and cities</li> </ul>	
<b>Goals</b>				
<ul style="list-style-type: none"> <li>• Focus lies mainly on elimination of pollution and creation of riverside recreation; ecological improvement hardly plays a role</li> </ul>	<ul style="list-style-type: none"> <li>• Focus lies mainly on flood protection; partly associated with ecological, urban and social issues (recreation, education, pedestrian and bicycle traffic support)</li> </ul>	<ul style="list-style-type: none"> <li>• Differ according to the area and kind of stream or river;</li> <li>• In general ecological, social and spatial goals are pursued in urban areas whereas economic aspects - aside from flood protection - are less considered</li> </ul>		
<b>Public and stakeholder involvement</b>				
<ul style="list-style-type: none"> <li>• Lack of elaborated common planning and consensus procedures dedicated to urban river spaces management</li> <li>• Information for public usually at the end of the project planning or even after realisation.</li> </ul>	<ul style="list-style-type: none"> <li>• Still insufficient, only affected people are involved, information for the public only at the end</li> </ul>	<ul style="list-style-type: none"> <li>• Affected people are involved</li> <li>• Involvement of other stakeholders and the public depends on the discretion and the commitment of the executive organisation</li> </ul>	<ul style="list-style-type: none"> <li>• Informative meetings are often organised. Active involvement by competitions or workshops exists less frequently.</li> </ul>	
<b>Public perception</b>				
<ul style="list-style-type: none"> <li>• Some of the projects have social support from the beginning, but mostly projects have been accepted by public after implementation. People usually do not believe that everything planned will be achieved and benefit them.</li> </ul>	<ul style="list-style-type: none"> <li>• Good acceptance after completion of projects</li> <li>• In some cases initial misunderstandings and negative reactions due to lack of involvement of stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>• Even if projects were controversial during the planning period they are well accepted by the public after the completion.</li> </ul>		

Poland		Czech Republic	Germany	
Northern Poland	Southern Poland		Baden-Württemberg/ Bavaria	Saxony
<b>Impediments / most difficult obstacles</b>				
<ul style="list-style-type: none"> <li>• Lack of experience with and methodology for integral urban-natural revitalisation projects</li> <li>• Lack of legislative mechanisms, public-private partnership models and local financial mechanisms verified under Polish conditions</li> <li>• Low consciousness in society</li> <li>• Lack of databases about catchment areas and incompatible statistic data connected with different spheres of city life</li> <li>• Problems with land acquisition</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of financial resources</li> <li>• Land acquisition / land availability</li> <li>• Preference for conventional technical water course measures due to lack of information/money</li> <li>• Insufficient awareness and possibilities for town authorities to intervene into flood protection projects and to call for revitalisation principles</li> <li>• The focus lies mostly on small streams</li> <li>• Lack of education and experience in ecological river revitalisation</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of financial resources</li> <li>• Land acquisition / land availability</li> <li>• Lack of public awareness and support</li> <li>• Speculation on land prices</li> <li>• Existing infrastructure</li> <li>• Unclear structures and competencies within administration</li> <li>• Lack of cooperation</li> <li>• Only few competent planning offices</li> <li>• Contaminated sites</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of financial resources</li> <li>• Existing infrastructure</li> </ul>	
<b>Supporting issues / key factors for success</b>				
<ul style="list-style-type: none"> <li>• Implementation of integrated planning methods</li> <li>• Financing by the city budget, state and European funds</li> <li>• Introduction of educational programmes and public consultation</li> <li>• Good cooperation of the realisation and project design teams</li> <li>• Innovation in planning and design</li> <li>• Individual initiative and bottom-up approach</li> </ul>	<ul style="list-style-type: none"> <li>• Strong personal commitment</li> <li>• Visionary approach</li> <li>• Availability of funds</li> <li>• Land in the possession of the executive organisation</li> <li>• Public participation for obtaining the land needed</li> <li>• Need for flood protection</li> <li>• Change in perception of urban rivers</li> <li>• Long-term and systematic activity</li> </ul>	<ul style="list-style-type: none"> <li>• Close cooperation of organisations/persons involved</li> <li>• Raising awareness to obtain public support</li> <li>• Tenacity and staying power of the executive organisation/specific persons</li> <li>• Competent partners for planning and implementation</li> <li>• Commitment of superior administration or political levels</li> <li>• Projects as part of superior planning/concepts</li> <li>• Tapping various funding sources, financing with mitigation fees</li> <li>• Land in the possession of the executive organisation</li> <li>• Cooperation with owners / farmers</li> <li>• Need for flood protection</li> <li>• Need for bank remediation on the Neckar</li> <li>• Legal requirements (e.g. WFD)</li> </ul>	<ul style="list-style-type: none"> <li>• Good cooperation of stakeholders involved</li> <li>• Support of the responsible institution by civic associations and the public</li> <li>• Growing attention to rivers: multifunctional approach</li> <li>• Splitting the budget</li> <li>• Positive public awareness</li> <li>• “Natural catastrophes” (floods)</li> <li>• Legal requirements (e.g. WFD)</li> <li>• Economic incentives for stakeholders (e.g. reduced fees for rainwater drainage)</li> </ul>	

Poland		Czech Republic	Germany	
Northern Poland	Southern Poland		Baden-Württemberg/ Bavaria	Saxony
<b>3 Recommendations</b>				
<ul style="list-style-type: none"> <li>• Integrated planning methods and continuity of revitalisation of waterside areas</li> <li>• Water quality improvement</li> <li>• Diagnosis of the catchment conditions and adjustment of the goals</li> <li>• Customising solutions to the spatial abilities</li> <li>• Enhancing the city's image</li> <li>• Providing public access</li> <li>• Favouring forms of use that require direct access to water</li> <li>• Awareness of riverside identity</li> <li>• Staging and management of the revitalisation process and result monitoring</li> <li>• Caring for public acceptance</li> <li>• Public-private partnership solutions</li> <li>• Cooperation on regional level</li> </ul>		<ul style="list-style-type: none"> <li>• Better public and stakeholder involvement from the beginning of the project</li> <li>• Good promotion of projects</li> <li>• Interconnection between flood protection and revitalisation aims</li> <li>• Good dissemination of best revitalisation practices examples among decision makers and general public</li> <li>• Educational activities extended to schools, to general public and decision makers.</li> <li>• Better cooperation between town authorities and water management authorities</li> </ul>	<ul style="list-style-type: none"> <li>• Promote the project / raise public awareness; promote the goal you think will convince most</li> <li>• Put the project in a context / combination with other projects /</li> <li>• Check the combination of pure revitalisation activities and accompanying measures that can foster and support the revitalisation idea in the stakeholder public</li> <li>• Develop staying power</li> <li>• Follow a pragmatic strategy / find creative solutions</li> <li>• Have drafts prepared in advance</li> <li>• Cooperate closely / set up project teams / clarify competencies</li> <li>• Find allies / partners</li> <li>• Split the total budget into multiple parts to acquire funding</li> <li>• Use the impact mitigation regulation / the eco-account</li> <li>• Pursue far-sighted land acquisition</li> <li>• Implement sustainable land-use in the floodplain</li> <li>• Involve stakeholders</li> <li>• Work for positive media coverage and public perceptions</li> <li>• Supervise construction on ecological issues</li> <li>• Ensure that surveys are thorough and qualified</li> </ul>	



## 1.3 Guidelines for urban river revitalisation

In the context of the REURIS project the following guidelines for urban river revitalisation have been developed in cooperation with experts from Poland, the Czech Republic and Germany.

The guidelines are intended to help planners, decision-makers, executing authorities and stakeholders consider the wide range of aspects (ecological, economic and social) relevant to the specific requirements of river revitalisation in an urban environment.

The guidelines are divided into four basic groups:

- Enhancing the ecological functionality of the watercourse as an ecosystem
- Providing flood protection
- Increasing the residential, cultural and recreational value
- Securing permanently sustainable use of watercourses and their alluvial plains

Table 1.3-1: Guidelines for urban river revitalisation (© REURIS project team).

<b>1.</b>	<b>Enhancing the ecological functionality of the watercourse as an ecosystem</b>
1.1	<p>Renew the dynamic water regime of watercourses:</p> <ul style="list-style-type: none"> <li>• Increase the morphological diversity of the river bed as well as the discharge diversity and its dynamics.</li> <li>• Modify of the sediment regime through a suitable longitudinal profile of the watercourse.</li> <li>• Lengthen the watercourses.</li> </ul>
1.2	<p>Renew minor watercourses:</p> <ul style="list-style-type: none"> <li>• Remove the channelled underground stretches of the watercourses and prevent further channelling.</li> <li>• Shallow the river beds.</li> <li>• Loosen or re-meander straightened river beds in minor watercourses, if possible, according to their historical development.</li> </ul>
1.3	<p>Increase the biodiversity of the biotopes in the alluvial plains:</p> <ul style="list-style-type: none"> <li>• Improve local habitats in response to the local conditions of each river valley.</li> <li>• Remove invasive plant species.</li> <li>• Support the reintroduction of native plant species and habitats.</li> </ul>
1.4	<p>Provide migration permeability of watercourses:</p> <ul style="list-style-type: none"> <li>• Build fish passes.</li> <li>• Provide migration permeability by transversal objects (stepped weirs and chutes), and technical alterations (shallow water column and high flow speed) to the watercourse.</li> </ul>
1.5	Prefer nature-like adaptations over technical modifications to the landscape.
1.6	<p>Improve the water quality:</p> <ul style="list-style-type: none"> <li>• Support the self-cleaning capacity of watercourses.</li> <li>• Add water infrastructure (build separated sewer systems, wastewater treatment plants).</li> <li>• Pre-treat rainwater before it reaches the river.</li> <li>• Eliminate pollution sources.</li> </ul>
1.7	<p>Renew and enhance the supplementary plant cover:</p> <ul style="list-style-type: none"> <li>• Plant indigenous trees, shrubs, reed beds, littoral vegetation, water plants, etc.</li> </ul>

<b>2.</b>	<b>Providing flood protection</b>
2.1	Mitigate the risk of flood damage: <ul style="list-style-type: none"> <li>• Adopt the idea that rivers need more space.</li> <li>• Avoid artificial elevation of terrain due to building development in active flood zones.</li> </ul>
2.2	Increase the retention capacity of the landscape: <ul style="list-style-type: none"> <li>• Allow the natural overflow of rivers into the alluvial plains.</li> <li>• Renew and create wetlands, where it is possible.</li> <li>• Implement elements of the systems of ecological stability.</li> </ul>
2.3	Decrease direct outflow from the drainage area (especially important for small watercourses): <ul style="list-style-type: none"> <li>• Increase the rate of rainwater infiltration in the area by allowing its infiltration into the soil profile.</li> <li>• Increase the rate of rainwater retention in the area.</li> <li>• Reuse excessive rainwater in households and the municipal sector.</li> </ul>
2.4	Decrease the rate of water outflow from the drainage area: <ul style="list-style-type: none"> <li>• Increase the coarseness of the alluvial plain by using natural coarse surfaces to reduce the water flow rate.</li> </ul>
2.5	Implement technical measures to catch extreme flow rates: <ul style="list-style-type: none"> <li>• Use retention tanks and dry polders in the river valley.</li> </ul>
2.6	Implement technical flood measures in an aesthetically pleasing way.
<b>3.</b>	<b>Increasing the residential, cultural and recreational value</b>
3.1	Incorporate water into the city's image as a major landscaping feature of the urbanised space: <ul style="list-style-type: none"> <li>• Use the alluvial plains as significant urban spaces with a unique potential for recreation and leisure.</li> <li>• Increase the aesthetic value of residential and recreational sites.</li> </ul>
3.2	Create sport and recreational paths (greenways) along watercourses: <ul style="list-style-type: none"> <li>• Combine paths for pedestrians, cyclists, in-line skaters and other non-motorised users, following the terrain in the alluvial plains.</li> <li>• Improve the permeability of the city and its connection with the surrounding landscape.</li> </ul>
3.3	Build sport and recreational facilities in the alluvial plains: <ul style="list-style-type: none"> <li>• Create places for short-term recreation of the public along the sport and recreational paths.</li> </ul>
3.4	Provide supplementary infrastructure: <ul style="list-style-type: none"> <li>• Build an information system along the sport and recreational paths (signposts, information boards, panels along educational paths providing information about natural and cultural features and values in the area).</li> <li>• Install street furniture.</li> <li>• Present artefacts and temporary exhibitions.</li> </ul>
3.5	Provide public access to the water: <ul style="list-style-type: none"> <li>• Build play facilities providing interaction with the water element.</li> <li>• Provide possibilities for fishing.</li> <li>• Allow direct public access to the watercourse in some places where it is safe and possible.</li> </ul>

3.6	Do landscaping: <ul style="list-style-type: none"> <li>• Differentiate between watercourse solutions in urbanised areas and open landscape.</li> <li>• Plant tree lanes along sport and recreational paths.</li> <li>• Create new parks.</li> </ul>
<b>4.</b>	<b>Securing permanently sustainable use of watercourses and their alluvial plains</b>
4.1	Involve the public in green space management and policy-making.
4.2	Improve the applicability of the land use planning process in terms of flood control and watercourse protection: <ul style="list-style-type: none"> <li>• Use the instrument of land use planning to apply the above-mentioned principles in the revitalisation of watercourses in urbanised areas.</li> <li>• Develop more detailed rules for the use of built-up areas concerning the risk of potential.</li> <li>• Consider flooding.</li> <li>• Build social consensus on actions and engineering measures oriented on public benefit.</li> </ul>
4.3	Set guidelines for the installation of small water turbines on watercourses.
4.4	Set rules for water withdrawal to secure a sufficient flow volume for maintaining the dynamic water regime of watercourses.
4.5	Minimise conflicts with infrastructure (bridges, roads, pipelines, etc.).

Detailed guidelines and their application in the context of the pilot actions can be downloaded from the project website: [www.reuris.gig.eu](http://www.reuris.gig.eu).

## 1.4 Transnationally valid recommendations

On the basis of the experience and findings generated in the context of the REURIS project, a transnationally valid scheme for planning and implementation as well as transnationally valid recommendations for planning and implementation were developed which can be followed in urban river revitalisation projects. For recommendations with the focus on public participation see Manual Part 2 and for recommendations with the focus on financing see Manual Part 3.

### 1.4.1 Schemes of planning and implementation

#### Overall planning scheme at the spatial dimension of the whole river or river basin

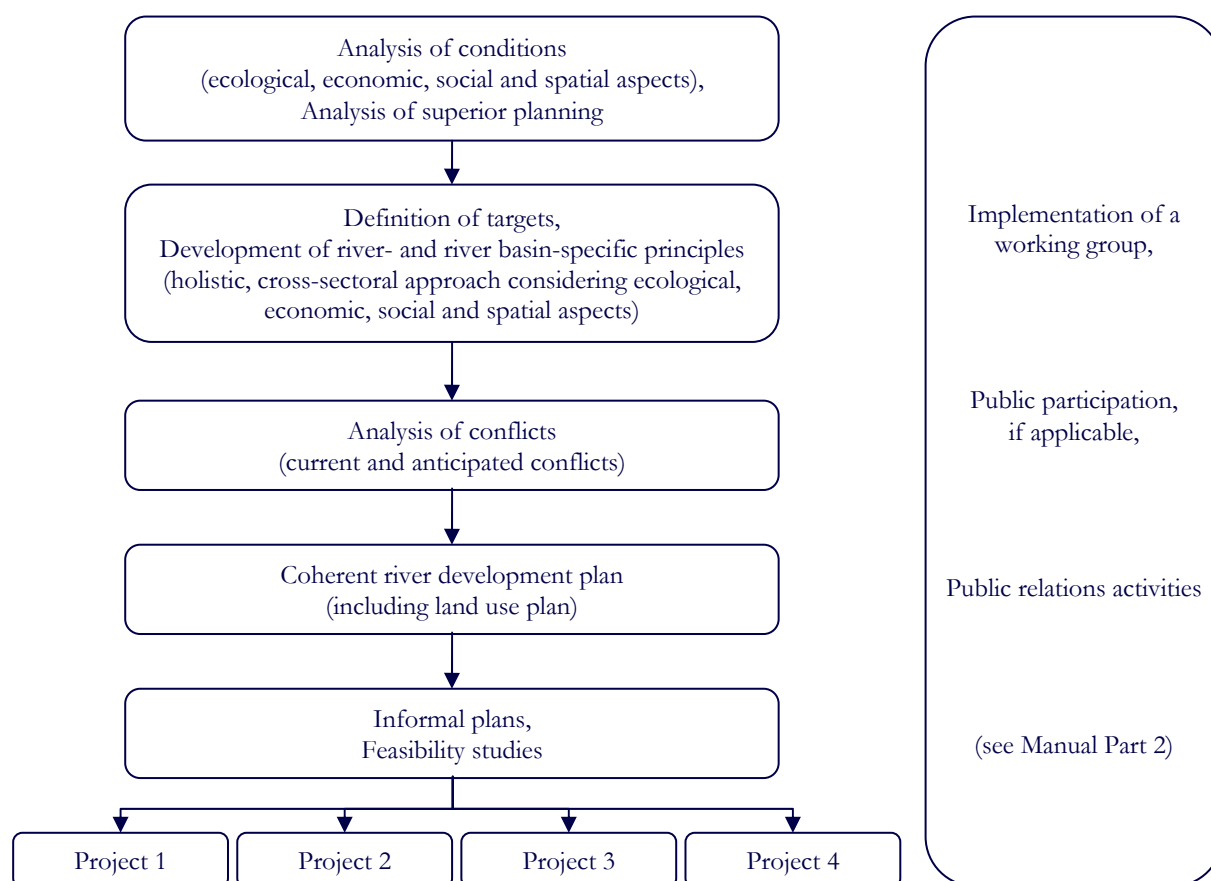


Figure 1.4-1: Overall planning scheme at the spatial dimension of the whole river or river basin (© REURIS project team).



## Planning scheme for a single project at the local spatial dimension

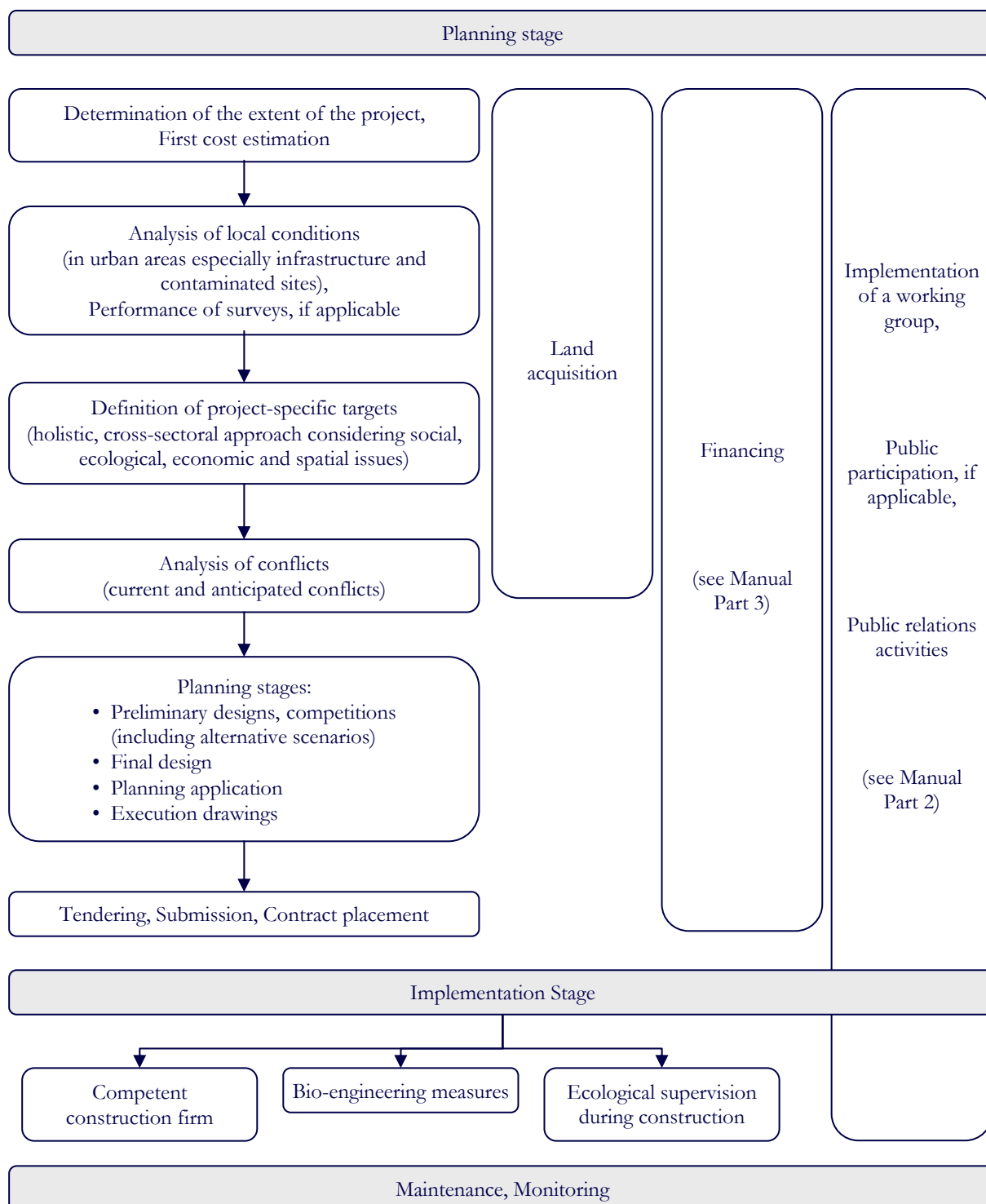


Figure 1.4-2: Planning scheme for a single project at the local spatial dimension (© REURIS project team).

---

## 1.4.2 Recommendations for planning and implementation

### Planning system and planning methods

- Consider the aims and requirements of sectoral planning (especially plans and regulations of the water management authorities, nature conservation management authorities and land use management authorities) and of spatial planning (regional and local spatial management plans, preparatory land use plans, binding land use plans) relevant for the area of your revitalisation project.
- Try to have your revitalisation project incorporated into the regional and the local spatial management plan, especially if your project is not limited to a single site but will affect the whole course of a river or a creek within your city or will affect urban river spaces with adjacent river banks and flood plains. In this way your project will be binding for public authorities and your project has to be taken into account in subordinate planning.
- Try to have your project incorporated into binding land use plans or regulatory spatial management plans so it will be binding for the general public.
- Take into account that the incorporation of urban river revitalisation projects into regional and urban spatial planning takes a lot of time and you will have to convince politicians and the general public of your project.
- Consider whether an informal plan can help expedite your project's implementation. If so, try to find an appropriate scale and a convincing design for your plan.
- Determine to what extent a landscape architecture competition or a competition for town planners may contribute to finding the best design and the very best solution for your river revitalisation project. Consider what kind of competition is appropriate to the planning relevant problem to be solved. Be aware of all specific regulations and the high costs. Find the most suited persons and nominate them for the competition jury.
- If you are involved in sectoral or spatial planning or even in decision making within the context of spatial planning, try to make sure that the interests of revitalisation projects will be considered and weighted adequately.
- Check what kind of information and data needed for the project is available. Plan to have enough time to collect data and prepare it for proper use.
- Check whether an environmental impact assessment is required.
- Determine whether your project might serve as a compensation measure for environmental impacts caused by other projects.
- Check whether special licenses are needed to realise the project at an early stage in order to draw up a realistic timetable.
- Take into account EU regulations such as the European Water Framework Directive, the Flood Directive and the Habitats Directive.
- Determine whether the very special regulations of national water law, national nature conservation law and national building code or building acts must be applied. Take into account that all documents needed to obtain a land use decision. Plan approval or building permit must be prepared as specified by national laws and regulations. Remember that preparing these materials is very time-consuming. The better the documents are and the better they conform to the special requirements of the licensing authority, the faster you can expect to obtain a license.
- Do not become discouraged by so many regulations. Continue pursuing your ideas and being creative.

---

## Planning Strategy

- Follow the holistic restoration principles (see Guidelines for urban river revitalisation, chapter 1.3).
- Follow a holistic, cross-sectoral approach and integrated planning methods, taking into account ecological, social and economic issues simultaneously (considering the impact of investments on natural and cultural resources, on the activation of waterways, on the attractiveness of tourist routes as well as on flood safety, etc.).
- Consider measures that will improve the availability, attractiveness and safety of riversides as well as increase retention capacity and biodiversity.
- Remember that waterfronts are important in determining a city's attractiveness, the development of tourism and recreation and in creating social space and cultural events.
- Integrate aspects of the city's common heritage into the revitalised areas, such as river-related events, architectural and natural resources and also remnants of the industrial past (riverside identity).
- Secure accessibility and visibility of riverside areas for residents and tourists of all ages and social classes. Access to the water and continuity of waterside routes should be ensured.
- Consider forms of use that allow direct access to the water such as water transport (freight and passengers), sports, recreation, entertainment, culture and education.
- Start with a detailed analysis of the waterside landscape and the conditions of the whole catchment area, adjust the goals to the opportunities and needs of the river basin and then proceed with renaturalisation of the floodplains.
- Ensure planning flexibility so that adapting to substantial changes is possible.
- Create specific guidelines for your water body which can help to define goals and priorities and avoid mistakes and misunderstandings. Consider the whole river or stream and avoid focusing on isolated measures.
- Emphasise the project's multiple advantages.
- If suitable, preferably promote the goal you think will best convince public and decision-makers even if there are many other important goals.
- Situate the planned project in a superior context which will help to promote the project and raise public awareness.
- Implement demonstration measures which help to convince people and decision-makers (model stretches, flowering meadows, etc.).
- Combine revitalisation measures with other projects, activities or goals to ensure better acceptance, e.g., combine flood protection measures and enhancement of the retention capacity with revitalisation measures.
- Customise solutions to suit the spatial conditions. Socio-cultural and aesthetic issues should be prioritised in compact downtown areas, whereas larger urban green complexes provide opportunities for natural revitalisation and creation of aquatic habitats.
- Develop tenacity and staying power. Revitalisation of urban waterside areas is a long-term, complex process. Often it can only be implemented in several stages.
- Use project management methodology.
- Monitor the efficiency of the projects to gain more experience.
- Follow a pragmatic approach and use every opportunity offered to improve even only small river sections.
- Prepare draft plans in advance in order to be able to present or start a project at short notice.
- Provide sufficient resources such as staff and funds.
- Practice far-sighted land acquisition.
- Find creative solutions in consensus with land owners, land users and farmers to acquire the land needed (land exchange, realignment and consolidation of agricultural land holdings, adding the measure to the eco-account to reduce future land requirements).
- Provide preliminary assessment of the future maintenance requirements for revitalised river stretches.

- 
- Try to implement sustainable land use in the floodplain, e.g. in cooperation with farmers or private associations and save maintenance costs in doing so.
  - Be aware of the impact climate change may have on your project. Spatial planning and sectoral planning often do not adequately take into account the demands of potential climate change.

## Implementation

- If possible, start revitalisation of a river or stream from the upper reaches downstream. Otherwise, the current emerging from a paved stretch and encountering the stronger coarseness of a renaturated stretch may educe strong erosive forces and require comprehensive pavements in the transition area.
- Make sure in advance, that surveys of the project area are thorough and qualified.
- Eliminate sources of pollution in the catchment area as a precondition for proper revitalisation and increase the self-cleaning capacity of water bodies.
- Hire a supervisory team skilled in all of the implemented activities. Ensure that construction is supervised with respect to ecological issues so that the goals are met.
- Prioritise bio-engineering measures rather than technical solutions.
- Use indigenous seeds and plant material to ensure conservation and facilitation of biodiversity and adaptation to the specific local conditions. Care in due time for propagation and cultivation of indigenous plant material if it is not available

## Stakeholders' involvement including participative planning

- Cooperate closely with all organisations / departments involved. Effective revitalisation of riverside areas requires cooperation on a regional level. Share knowledge and experience with other actors involved.
- Set up interdisciplinary teams with representatives who can take decisions at short notice.
- Clarify the competencies of different departments in advance.
- Find allies / partners to cooperate in planning and implementation (public authorities, private or semi-private stakeholders).
- Involve stakeholders and consider the social needs and expectations of the local community. This can facilitate finding solutions that are supported by everyone involved and thus accelerate the planning and implementation process. It also helps to ensure the sustainability of the project's results.
- Inform and involve the public in the planning and implementation process. Public awareness and support can help to put pressure on decision-makers and secure acceptance for the project by dispelling fears.
- Inform about all aspects of the project such as the construction timeframe, necessary changes in the planning, delays, or if it is necessary to make compromises.
- If unpopular measures are taken, explain them in advance (e.g. tree felling). The same is true if technical solutions are required that may not meet with the inhabitants' approval or ecological aspects.
- For further recommendations on public participation see Manual Part 2.

## Information, education and public relations activities

- Make efforts to secure positive media coverage and public perceptions of the project by implementing an on-going information campaign for the project. Remember to use always the same logos and graphic design.
- Try to convince local media of the significance of the project.
- Promote the project and its benefits by organising events, celebrations, ground-breaking ceremonies, inaugurations, guided tours, leaflets, press relations, exhibitions, display boards, etc.



- 
- Implement public education programmes and improve training in revitalisation principles that target different social groups.
  - Raise awareness of the manifold benefits of revitalisation projects.
  - Disseminate information about good and best revitalisation practices examples among decision-makers and the general public.

## Financing

- Analyse opportunities for dividing the project into several stages that are realised step-by-step and financed from different sources.
- Split the necessary budget in multiple parts and find sources for them. It is more probable that smaller amounts will be allocated by multiple sources rather a large sum from a single source. Obtain information on possible grants from various sources.
- Accept small financial contributions and combine them instead of waiting for the “big fish”.
- Use impact mitigation regulation / impact mitigation fees to finance revitalisation projects.
- Explore possibilities for private funding (e.g. foundations, Private-Public-Partnerships, sharing costs with private developers).
- Find institutions (sponsors) that are able to make a permanent contribution to the project, even if it is small (particularly during maintenance).
- For further recommendations on financing see Manual Part 3.

## 1.5 References and further reading

### References

- Atanasow A. (2005): How investor can participate in the preparation of a study on the conditions and directions of development in a municipality. *Polish Construction Review*, Vol. 9, No. 54, pp. 16-17.
- BMVBS - Bundesministerium für Verkehr, Bau und Stadtentwicklung (2008): *Richtlinien für Planungswettbewerbe (RPW 2008)*.
- Bosch & Partner GmbH (2010): *Existing Planning Methods*. Study elaborated in the context of the REURIS project. Herne - Munich.
- Czyżewska, A. (2009): *Sustainable development - strategies - programs - projects*. Poznan, 13.02.2009.
- ENMaR - European Network of Municipalities and Rivers (2007): *Water: local planning and management. Practical examples from England - Germany - Latvia - Spain - Sweden*. Available online at: <http://www.enmar.de>, checked in 03/2010.
- EUKN - European Urban Knowledge Network (2005): *National Urban Policy of Poland*. Available online at: [http://www.eukn.org/E\\_library/Urban\\_Policy/National\\_Urban\\_Policy\\_of\\_Poland](http://www.eukn.org/E_library/Urban_Policy/National_Urban_Policy_of_Poland), checked on 09/12/2011.
- Fürst, D.; Scholles, F. (ed.) (2001): *Handbuch Theorien und Methoden der Raum- und Umweltplanung*. Dortmund.
- Hajduk S. (2004): *System planowania przestrzennego w Polsce. The system of spatial planning in Poland*. *Zeszyty Naukowe Politechniki Białostockiej. Ekonomia i Zarządzanie*, Z. 9, pp. 87-95.
- Januchta-Szostak, A. (2010): *The Water Impact on the Quality of Urban Space. Research on urban river spaces revitalisation processes in the northern Poland*. In: Gerrit J. Carsjens (ed.) *Landscape Legacy. Landscape Architecture and Planning Between Art and Science*. Maastricht, the Netherlands, 12-14 May 2010, ISOMUL, Wageningen University, 2010, p. 210.
- Kopiesz-Unger, J. (2000): *Urbanistyka w systemie planowania przestrzennego*. Wydawnictwo Politechniki Poznańskiej, Poznan.
- Mliczyńska-Hajda, D. (2007): *Development and Urban Revitalisation in Poland*. Available online at: <http://www.ifhp2007copenhagen.dk/Components/GetMedia.aspx?id=52f2f7bb-f57e-406d-9cd1-7da30b240062>, checked on 01/12/2011.
- Pahl-Weber, E.; Henckel, D. (ed.) (2008): *The Planning System and Planning Terms in Germany*. *Studies in Spatial Development*, No. 7. Akademie für Raumforschung und Landesplanung (ARL), Hannover.
- Sęk, Ł. (2008): *Amendments to Construction law and Act on Spatial Planning and Development (part II)*. *Polish Construction Review*, Vol. 8, No. 89, pp. 15-16.
- WiN - Waterfront international Network (n.d.): *10 Principles for Sustainable Urban Waterfront Development*. Available online at: <http://www.waterfront-net.org/services/documents.htm>, checked on 16/01/2012.
- Wiszniewska, B.; Farr, J.A.; Jendroska, J. (2002), *Handbook on Environmental Impact Assessment Procedures in Poland*. Ministry of Environment, Warsaw. Available online at: <http://www.mos.gov.pl>, checked on 20/01/2004.
- Woloszyn W. (2004): *Evolution of environmental impact assessment in Poland: problems and prospects*. *Impact Assessment and Project Appraisal*, Vol. 22, No. 2, pp. 109-119.

---

## Further reading

- BMVBS - Bundesministerium für Verkehr, Bau und Stadtentwicklung (ed.) (2006): Grünzug Neckartal. Projekt des Forschungsprogramms „Modellvorhaben der Raumordnung“ (MORO) des Bundesministeriums für Verkehr, Bau und Stadtentwicklung (BMVBS) und des Bundesamtes für Bauwesen und Raumordnung (BBR), München.
- BMVBS - Bundesministerium für Verkehr, Bau und Stadtentwicklung (ed.) (2007): Strategien Grünzug Neckartal. Übergeordnetes Konzept für den „Grünzug Neckartal“. Projekt des Forschungsprogramms „Modellvorhaben der Raumordnung“ (MORO) des Bundesministeriums für Verkehr, Bau und Stadtentwicklung (BMVBS) und des Bundesamtes für Bauwesen und Raumordnung (BBR), München.
- BMVBS - Bundesministerium für Verkehr, Bau und Stadtentwicklung (Hrsg.) (2009): Realisierung Grünzug Neckartal. Umsetzungskonzept für den „Grünzug Neckartal“. Projekt des Forschungsprogramms „Modellvorhaben der Raumordnung“ (MORO) des Bundesministeriums für Verkehr, Bau und Stadtentwicklung (BMVBS) und des Bundesinstitutes für Bau-, Stadt- und Raumforschung (BBR), München.
- Heimann, S. (2008): Urbane Fließgewässer in der EG-Wasserrahmenrichtlinie. Ein Positionspapier. Available online at: <http://www.netzwerk-flur.de>, checked in 01/2010
- Landeshauptstadt Stuttgart, Amt für Stadtplanung und Stadterneuerung (2007): Levels of spatial planning in Stuttgart. Working papers on Urban Development Planning.
- Landeshauptstadt Stuttgart, Amt für Umweltschutz (2009): Environmental aspects in spatial planning in Stuttgart. Scripts by the Office for Environmental Protection No. 1/2009.
- MUNLV - Ministerium für Umwelt und Naturschutz, Landwirtschaft und Verbraucherschutz des Landes Nordrhein-Westfalen (ed.) (2008): Ökologische Gewässerprojekte von Städten und Gemeinden. Beiträge zur Umsetzung der europäischen Wasserrahmenrichtlinie in Nordrhein-Westfalen. Darmstadt.

## **1.6 Annex**



## Evaluation of projects in Poland

Table 1.6-1: Evaluation of planning and implementation processes (*nr* = not realised, *pr* = partly realised, *x* = implemented, *-* = not implemented, *nd* = no data) (© A. Januchta-Szostak).

Criteria	Complexity					Innovative solutions or methodology	Public involvement			Efficiency of use of capital and non-capital sources					Final score Σ	
	Project no.	Integration of spatial, environmental, social and economic issues	Consideration of regional structure	Integration of whole city structure	Consideration of catchment area		Introduction of integrated planning methods	In the planning process	In the implementation process	In the maintenance process	EU funds	Public budget	Private budget	Public-private partnership		Use of human capital
1A	nd	x	-	x	nd	x	nd	nd	nd	x	x	nd	nd	x	x	7
2A	nd	x	-	-	nd	nd	nd	nd	nd	x	x	nd	nd	x	x	5
3A nr	nd	x	nd	nd	nd	x	nd	-	-	x	x	nd	nd	nd	x	5
4B	x	x	x	nd	x	x	x	-	-	x	x	-	-	x	x	10
5B nr	x	x	x	-	x	x	x	-	-	-	-	-	-	x	x	8
6C	x	x	x	nd	x	nd	x	x	x	x	x	nd	nd	x	x	11
7C	x	-	x	-	nd	x	x	nd	nd	x	x	-	-	x	x	8
8C pr	x	-	x	nd	x	x	x	x	nd	x	x	x	x	x	x	12
9C pr	x	-	x	nd	x	x	x	x	nd	nd	x	nd	nd	x	x	9
10C pr	x	x	x	nd	x	x	x	nd	nd	x	x	nd	nd	x	x	10
11C pr	x	x	x	nd	x	x	x	nd	nd	x	x	nd	nd	x	x	10
12D	x	x	-	nd	nd	-	nd	nd	nd	x	x	nd	nd	nd	x	5
13D	x	x	x	nd	nd	nd	nd	nd	nd	x	x	nd	nd	nd	x	6
14D pr	x	x	nd	nd	nd	nd	x	nd	nd	x	x	-	-	x	x	7
15D nr	x	x	x	nd	x	nd	x	x	-	nd	nd	nd	nd	nd	x	7
16D nr	x	x	x	nd	x	x	x	-	-	nd	nd	nd	nd	x	x	8
17D nr	x	nd	x	nd	nd	nd	x	-	-	nd	nd	nd	nd	nd	nd	-
18D nr	x	nd	x	nd	nd	nd	x	-	-	nd	nd	nd	nd	nd	nd	-
19E	x	-	x	x	-	x	x	-	x	x	x	-	-	x	x	10
20E	x	nd	nd	nd	nd	x	nd	nd	nd	nd	nd	nd	nd	nd	x	-
21E	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	x	-
22E	x	-	x	x	-	-	x	x	nd	-	x	-	-	x	x	8
23E nr	x	nd	nd	x	nd	nd	nd	nd	nd	nd	nd	nd	nd	nd	x	-
24E nr	x	nd	x	x	x	x	x	-	-	nd	nd	nd	nd	nd	x	7
25E nr	x	x	x	x	-	-	x	nd	nd	nd	nd	nd	nd	nd	x	6
26A	x	x	x	x	-	x	nd	nd	nd	x	x	x	-	x	x	9
27A	x	nd	x	x	nd	-	-	-	-	x	-	x	x	x	x	9
28A	nd	-	-	x	nd	-	nd	nd	nd	nd	nd	nd	nd	x	x	-(3)
29B	x	x	nd	nd	nd	nd	nd	nd	-	nd	nd	nd	nd	nd	x	-(3)
30B	x	nd	x	nd	x	-	x	nd	nd	-	x	x	nd	x	x	8
31C	x	x	x	-	x	x	x	x	x	x	x	x	nd	x	x	12
32D	-	-	x	-	-	nd	x	nd	nd	x	x	x	-	x	x	7
33D	x	x	x	nd	-	-	nd	nd	nd	nd	x	nd	nd	nd	x	5
34E	x	nd	x	-	x	-	nd	nd	nd	-	x	-	-	x	x	6
35D	x	nd	nd	-	nd	-	nd	nd	nd	x	x	-	nd	nd	x	-(4)
36E	x	nd	x	x	x	-	x	nd	nd	x	x	-	-	x	x	9

Table 1.6-2: Planning aspects in Table 1.6-1 for projects in Northern Poland (nr = not realised, pr = partly realised, x = implemented, nd = no data) (© A. Januchta-Szostak).

Project no.	Planning aspects												
	Regional planning	Urban planning, land use plan	Landscape planning	Architecture	Preservation of historical monuments	Flood protection planning	Local catchment planning	Conception planning	Executive plan	Hydrological and hydraulic aspects	Land acquisition	EU funds	Monitoring system
1A	x	x	x			x	x	x	x	x	x	x	x
2A	x	x	x	x				x	x	x		x	nd
3A nr	x		x		x	x		x		x		x	
4B	x	x	x	x			nd	x		x		x	
5B nr		x	x	x		x		x		x			
6C	x	x		x	x	x		x	x		x	x	x
7C		x	x	x	x	x		x	x	x		x	x
8C pr		x	x	x	x			x	x	x	x	x	x
9C pr		x	x	x	x	x		x	x			nd	x
10C pr		x	x	x	x		nd	x	nd		x	nd	nd
11C nr	x	x	x	x	x	x	nd	x	x	x	x	x	nd
12D		x		x	x	x			x	x		x	
13D		x		x	x	x		x	x	x		x	
14D pr		x	x	x				x	x	x		x	
15D nr		x	x	x	nd	x		x	nd	x		nd	
16D nr		x	x	nd	nd			x		x		nd	
17D nr		x	x	x	nd	x		x					
18D nr		x	x	x	x	x		x					
19E		x	x	x	x			x	x	x		x	x
20E			x	x	x	x		x	x				
21E			x					x	x	x			
22E			x	x		x	x	x	x	x	x		
23E		x	x		x	x	x	x	x	x			
24E nr		x	x		x	x	x	x		x	nd	nd	nd
25E nr		x	x	x				x		x			

Table 1.6-3: Evaluation of the results of project implementation - Northern Poland (x = implemented, nd = no data) (© A. Januchta-Szostak).

Results of implementation		Project no.	4B	6C	7C	8C	12 D	13 D	14 D	19 E	20 E	21 E	22 E	23 E	
		Location (city, river)	Bydgoszcz, BWV	Tczew, Wisła	Bydgoszcz, Mill Island	Gdańsk, Granary Island	Kołobrzeg, Yacht port	Gorzów, Warta	Konin, Warta	Żyrardów, Pisia	Toruń, Bacha	Toruń, Martówka	Gdańsk, Strzyża	Gdańsk, Ractunia	
Effectiveness	Whether and how well practices affect the development of the city (0-3)		3	2	2	2	2	1	1	1	1	0	1	0	
	Whether and how well practices affect the quality of public spaces (0-3)		2	3	3	3	3	3	2	3	3	3	3	2	
	Whether and how well practices affect the quality of water bodies (0-3)		2	0	1	1	1	0	0	3	1	2	2	1	
Sustainability	Whether and how the implemented practices integrate such aspects as: (0-3)	Environmental protection	1	1	1	1	0	0	0	2	0	2	1	1	
		Social development	3	3	3	3	3	2	2	3	2	3	2	1	
		Spatial coherency	2	2	3	3	2	3	1	2	1	1	2	2	
		Sustainable economy	2	2	2	2	2	2	1	1	1	0	2	1	
<b>Detailed criteria:</b>	$\Sigma$	<b>15</b>	13	<b>15</b>	<b>15</b>	13	11	7	<b>15</b>	9	11	13	7		
Hydro-ecological	Wilde life conservation		x		x					x		x			
	Biological diversity		x	x						x		x			
	Continuity of migration corridors		x	x	x			x							
	Water quality improvement		x	x	x		x		x	x	x	x	x	x	
	Providing flood protection		x	x	x	x		x	x	x	x		x	x	
	Increasing the retention capacity of the landscape, Improvement of water balance (groundwater)		x							x		x	x	x	
	Reconstruction (uncovering) of historically existing watercourses				x					x	x				
	Renaturalisation of rivers, meandering									x					
	Other hydro-ecological results:														
	Microclimate and air circulation		x		x						x	x	x	x	x
	Water ecosystem status		x								x				
$\Sigma$		8	4	6	1	1	2	2	9	4	5	4	4		
Social and functional	reation of attractive and diverse public spaces		x	x	x	x	x	x	x	x	x	x	x	x	
	Accessibility of river banks		x	x	x	x	x	x	x			x			
	Continuity of riverside pedestrian and bicycle tracks		x	x	x	x				x	x		x	nd	
	Experience of nature		x	x	x				x	x		x			
	Integration of social groups of different ages and status		x	x	x	x	x	x	x			x	x		
	Public involvement in waterfront space management and policy making		x	x	x	x					x				
	Development of ecological consciousness		x	x	x						x	x	x		
	Increase in public safety		x	x	x	x	x	x	x	x	x	x	x	x	

Functional diversity	Sport fields	x		x							x			
	Recreation (strolling, jogging)	x	x	x	x	x	x	x	x		x	x	x	
	Cycling	x	x	x	x		x	x	x		x	x	x	
	Meeting points	x	x	x	x	x	x	x	x	x	x	x	x	
	Playgrounds			x					x	x	x	x		
	Fishing	x		x			x	x			x			
	Cultural activities	x	x	x	x	x	x	x	x		x			
	Historical heritage	x	x	x	x	x	x	x	x			x	x	
	Educational activities	x	x	x	x	x	x	x	x		x			
	Water tourism	x	x	x	x	x	x	x						
Other social results:														
$\Sigma$		17	15	18	13	10	12	14	15	5	15	9	6	
Spatial	Improvement of visual quality of waterfronts	architecture	x	x	x	x	x	x	x	x		x	x	
		vegetation	x	x	x		x		x	x		x	x	x
		hydro-technical infrastructure and embankments	x	x	x	x	x	x	x	x	x		x	x
	Spatial integration of the river with urban fabric		x		x	x		x	x	x	x		x	x
	Coherence with surrounding landscape		x	x	x	x	x	x	x	x	x	x	x	x
	Emphasising the identity of the site		x	x	x	x	x	x	x	x	x	x	x	x
	Brownfields rehabilitation (post-industrial, post-military)				x	x	x	x		x				
	Increase in historical and cultural value, modernisation and renovation of historical monuments.		x	x	x	x	x	x		x	x			x
$\Sigma$		7	6	8	7	7	7	6	8	6	3	6	7	
Economic	Business development		x	x	x	x	x	x	x	x		x	x	
	Number of new jobs		x	x	x	x	x	x		x				
	Number of new flats			x	x	x							x	
	Increase in service provision		x	x	x	x	x	x		x			x	
	Benefits of better recreation for local population		x	x	x	x			x	x		x	x	x
	Increase in property values		x	x	x	x		x	x	x	x		x	x
	Technical infrastructure improvement		x	x	x	x	x	x	x	x			x	x
	Reduction of the risk of flooding		x	x						x			x	x
	Benefits of better natural retention and groundwater situation		x							x		x	x	
	$\Sigma$		8	8	7	7	4	5	5	7	4	2	7	6
<b>Project no.</b>		4B	6C	7C	8C	12 D	13 D	14 D	19 E	20 E	21 E	22 E	23 E	
<b>Location (city, river)</b>		Bydgoszcz, BWV	Tczew, Wisła	Bydgoszcz, Mill Island	Gdańsk, Granary Island	Kołobrzeg, Yacht port	Gorzów, Warta	Konin, Warta	Żyrardów, Pisia	Toruń, Bacha	Toruń, Martówka	Gdańsk, Strzyża	Gdańsk, Radunia	
<b>Implementation results</b>	Total score $\Sigma$ :	55	46	54	43	35	37	34	54	28	36	39	30	



Table 1.6-4: Evaluation of the results of project implementation - Southern Poland (x = implemented, \* = and other cities)  
(© A. Januchta-Szostak; CMI Katowice).

Results of implementation		Project no.	26	27	28	29	30	31	32	33	34	35	36
			A	A	A	B	B	C	D	D	D	D	E
		Location (city, river)	Katowice*, Klodnica	Sosnowiec*, Czarna Przemsza	Dabrowa Górnicza*, Biała Przemsza	Bolesławiec, Bóbr	Belchatów, Rakówka	Kraków Vistula	Katowice Rawa	Wrocław, Odra	Łódź, Łódka	Jędrzejów, Brzeźnica	Łódź, Sokółówka
Ecological aspects	Passability for animals			x	x								
	Habitats for plants	x	x	x									x
	Habitats for animals		x	x									x
	Biodiversity		x	x									x
	Natural flood protection												x
	Pollution and contamination	x	x				x		x				
	Groundwater												
	Drainage system	x	x						x		x		
	Land use in catchment									x			x
	Soil												
	Local air circulation, climate system												
	Daylighting												
Water ecosystem status				x									x
$\Sigma$		3	6	5	0	1	0	2	1	1	0	6	
Economic aspects	Benefits of strengthening soft location stills												
	Rising property values in the neighbourhood					x							
	Benefits of biodiversity	x		x									x
	Benefits of better recreation for local population	x	x		x	x				x		x	
	Benefits of better flood protection and natural retention of drainage			x	x							x	x
	Costs and benefits of the elimination of pollution and contamination		x	x			x		x				x
	Benefits of better groundwater situation												
	Costs of site realisation and construction					x	x	x	x	x		x	x
	Costs for less intense land use in catchment												
	Cost of land												
	Maintenance costs for the site												
	Benefits from better local air circulation and better local climate												
Economic activation of local community					x		x		x		x		
$\Sigma$		2	2	3		3	2	2	3	0	4	4	
Social aspects	Experiencing nature			x									
	Footways		x		x	x	x		x			x	x
	Cycling routes		x				x	x					x
	Responsibility for nature				x								x
	Playing, natural playground					x							
	Meeting point					x		x		x			
Recreation	x	x			x	x	x	x	x		x	x	

	Strolling		x				x		x			
	Learning	x		x				x				
	Water tourism		x				x		x			
	Cultural and historic heritage				x		x		x			x
	Adventure											
	Interaction											
	$\Sigma$	2	6	3	5	3	7	4	6	0	2	4
Planning aspects	Regional planning	x	x	x				x				
	Town and city planning	x	x	x	x	x	x	x	x	x	x	x
	Landscape planning		x	x	x		x		x			x
	Availability of land						x					x
	Properties of land											
	Land use system		x	x	x				x		x	
	Flood protection planning	x		x	x					x		x
	Hydrological and hydraulic aspects	x		x	x			x		x	x	x
	Materials				x		x	x	x	x		x
	Financing		x	x	x	x	x	x	x	x		x
	Time scale for realisation		x	x	x	x	x		x	x		x
	Constructional planning				x	x	x	x	x	x		x
	Conceptional planning	x	x	x	x	x	x	x	x	x	x	x
	Local catchment planning											x
$\Sigma$	5	7	9	10	5	8	7	8	8	4	11	
<b>Project no.</b>	26 A	27 A	28 A	29 B	30 B	31 C	32 D	33 D	34 D	35 D	36 E	
<b>Location (city, river)</b>	Katowice*, Kłodnica	Sosnowiec*, Czarna Przemsza	Dabrowa Górnicza*, Biała Przemsza	Bolesławiec, Bóbr	Bełchatów, Rakówka	Kraków Vistula	Katowice Rawa	Wrocław, Odra	Łódź, Łódka	Jędrzejów, Brzeźnica	Łódź, Sokolówka	
<b>Implementation results</b>	Total score $\Sigma$ :	12	20	20	20	12	15	15	18	9	10	25

## MANUAL PART 2

# STAKEHOLDERS' INVOLVEMENT INCLUDING PARTICIPATIVE PLANNING



## **2. MANUAL PART 2**

Part 2 of the REURIS manual focuses on public participation in urban river revitalisation projects.

### **Structure of the REURIS Manual Part 2**

#### ***2.1 Introduction***

#### ***2.2 Terms and levels of participation***

The chapter defines the terms used in the context of REURIS, describes the actors in urban river revitalisation projects and the levels of participation in general.

#### ***2.3 Goals and advantages of public participation***

The chapter outlines the goals and advantages of public participation in the context of urban river revitalisation projects.

#### ***2.4 State of the art: Evaluation of models of participation and cooperation***

The chapter analyses, depicts and evaluates the state of the art of methods and models of participation and cooperation including participative planning applied in the partners' countries, both legally required forms of public participation and non-statutory forms.

#### ***2.5 Experiences in the context of REURIS***

The chapter presents the results and lessons learned from meetings with stakeholders and professionals in the context of the REURIS project and the pilot actions.

#### ***2.6 Transnationally valid recommendations***

The chapter summarises the findings of the studies and experiences in the form of recommendations for cooperation and public participation.

#### ***2.7 References***



---

## 2.1 Introduction

Public participation is a political principle or practice, and may also be recognised as a right.

The International Association of Public Participation (IAP2) has elaborated seven so-called core values for the practice of public participation (IAP2, 2007):

- Public participation is based on the belief that those who are affected by a decision have a right to be involved in the decision-making process.
- Public participation includes the promise that the public's contribution will influence the decision.
- Public participation promotes sustainable decisions by recognising and communicating the needs and interests of all participants, including decision-makers.
- Public participation seeks out and facilitates the involvement of those potentially affected by or interested in a decision.
- Public participation seeks input from participants in designing how they participate.
- Public participation provides participants with the information they need to participate in a meaningful way.
- Public participation communicates to participants how their input affected the decision.

In the 1990s, with a growing awareness of the environment and the emergence of the concept of sustainability, public participation took on a new dimension. The Conference on Environment and Development (Earth Summit) in Rio de Janeiro in 1992, Principle 10 (United Nations, 1992a) and Agenda 21 (United Nations, 1992b) both called for increased public participation in environmental decision-making and led to the adoption in Europe of the Aarhus Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (UNECE, 1998). The Aarhus Convention, which entered into force in 2001, grants the public rights regarding

- access to information,
- public participation, and
- access to justice

in governmental decision-making processes on matters concerning the local, national and transboundary environment.

The requirements of the Aarhus Convention and of correlated EU Directives were transferred into national laws.

The Rio Declaration and the Aarhus Convention therefore present the legal and political argument for involving stakeholders in urban river revitalisation planning.

## 2.2 Terms and levels of participation

### 2.2.1 Definition of terms

As there are many similar terms and sometimes different understandings with regard to public participation and participative planning, the REURIS partners discussed and agreed on the use of terms.

Thus, in the context of the REURIS project, the terms **public participation** and **stakeholders' involvement** are used synonymously and in a broad sense comprising

- all forms of participation and cooperation, and
- public participation in a planning process (participative planning).

**Participative planning processes** are usually initiated and coordinated by a public administrative authority, in which the public is involved, including both the public in the broader, general sense as well as in the sense of specifically defined target groups.

**Stakeholders** comprise all actors dealing with urban revitalisation projects in any kind. These may include both individuals and institutions, and both natural and legal persons. They are diverse, with differing interests, knowledge, skills, motivation, capacity and resources to bring to the planning process. The main stakeholders with regard to urban revitalisation projects include:

- public administrative representatives (representing public interests),  
*Public administration includes national, regional or local administrative authorities. The public administration is often the executing organisation (coordinating planning and implementation) and therefore responsible for the participation process.*
- politicians, and  
*Politicians often participate to assert a political interest or to fulfil their responsibility for a given aspect of town management and may not have expertise on the matter at hand. At the city and town level, the members of the city/town council take the decisions.*
- external stakeholders:
  - affected people,  
*They are people who are directly affected by the measure such as owners or adjacent owners.*
  - the “organised public”, and  
*The “organised public” includes local actors and representatives of private or public institutions or associations which typically express interest because they own property, do business in the given area, represent the interest of public welfare or have another concern regarding the area/issue/project (e.g. renters' associations, housing cooperatives, schools, museums, nature conservation groups, sports clubs, enterprises, local citizen groups, chambers of commerce, and NGOs).*
  - the public at large.  
*The fundamental reason citizens participate is to improve their quality of life or make a contribution to preserve nature or foster the common welfare. Although they may not have the knowledge, capacity and skills needed for the planning process, this shortcoming may be balanced by more formalised groups such as the organised public.*

## 2.2.2 Levels of participation

During the planning and implementation of a revitalisation process cooperation with the target groups and stakeholders can have varying forms of intensity. These forms of cooperation and participation differ with respect to the level of mandatory public involvement. Arnstein (1969) has provided a so-called ladder of public participation which depicts the various levels.

On the lower of eight defined rungs there is no opportunity to participate. On the top rung the participation process includes citizen power with respect to finding, controlling, or vetoing decisions.

In the following paragraphs based on the Arnstein ladder, five major steps of public involvement in a project's planning and implementation process will be discussed. In general, stage one (information) is necessary but does not include participation. For this reason it is discussed separately as the minimum level of public involvement. According to our understanding, a low degree of participation can first be found at stage two (consultation, inclusion of target groups) which poses little binding force on the decision-making authority. The power of the public increases step by step until, at stage five (Citizen Control, self-organisation), the highest degree of public participation and a handover of responsibility from the decision-making authority to stakeholders takes place.

These levels of participation should not be judged as alternatives but as parts of a process. In many cases stage one has to be reached before stage two can be initiated. In addition, as Wiedemann and Femers (1993) have stated, involvement can increase with the level of access to information as well as the citizen's rights in the decision-making process. Furthermore, it is neither possible nor necessary to involve all potential stakeholders in every step of the planning process or in decision-making (Hansen, Mäenpää, 2007: 23). The following illustration shows this relationship.

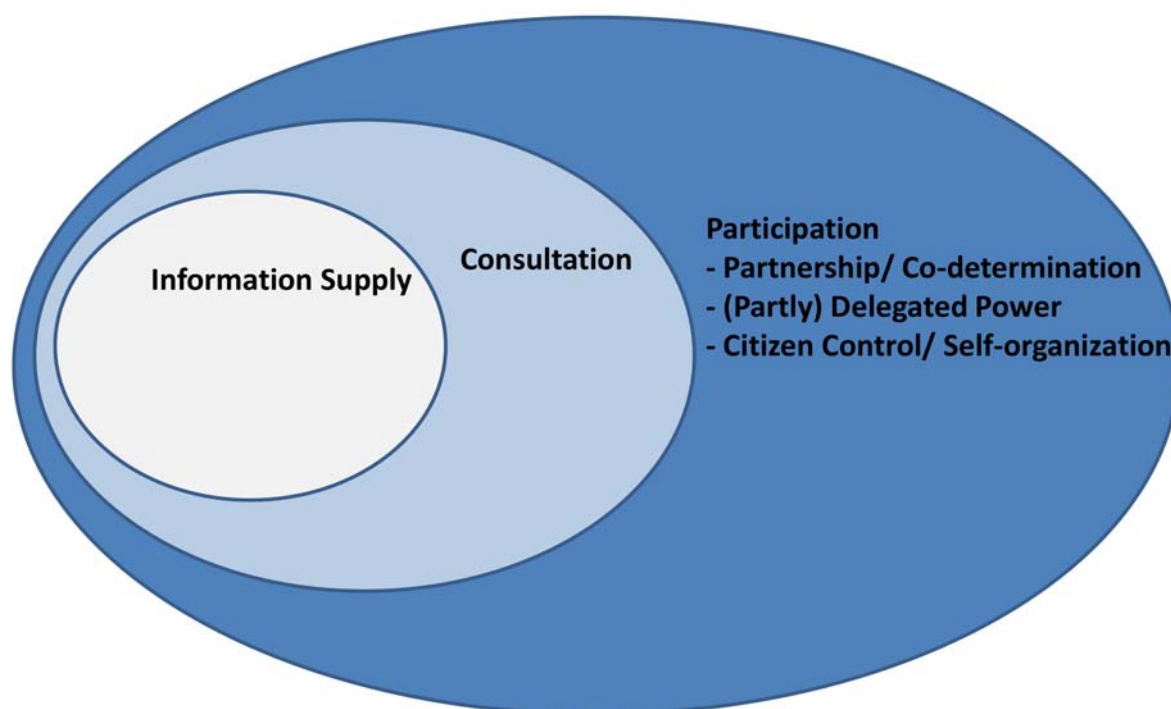


Figure 2.2-1: Levels of participation (adapted from European Commission, 2003: 13).

---

## Level 1: Information Supply

Arnstein has to be taken seriously: Many procedures are not participative as they do not offer possibilities for citizens to influence the decision-making process. Simple methods of informing the target groups are a necessary first step in any participation process but it does not yet include participation. Although informing the public is often classed as a kind of participation, “access to information and participation are clearly distinct matters” (Hansen, Mäenpää 2007: 20). The minimum requirement for enabling the public to participate in a project is access to information about the plans. If a deeper participation process is sought, active dissemination of information is necessary.

## Level 2: Consultation, Inclusion of Target Groups

The Common Implementation Strategy for the Water Framework Directive says that consultation is the first level of real participation (European Commission, 2003: 12). As mentioned above, other authors like Arnstein do not necessarily agree about this appraisal of consultation. Nevertheless, active consultation in the project development process shows that decision-makers are interested in the target groups' views and opinions and that they listen to members of target groups. Consultation may as well demonstrate decision-makers' willingness to take advice from target group(s). On the other hand, members of the target groups have no control about whether their point of view will really be taken into account. If consulting citizens “is not combined with other modes of participation, this rung of the ladder is still a sham since it offers no assurance that citizen concerns and ideas will be taken into account” (Arnstein, 1969: 217). Written consultation can mean making published material publicly available for comments as well as to ask people for their opinions in questionnaires. Oral consultation includes discussions in which stakeholders or an interested audience can debate with those who are in charge of the project. In order to evaluate the impact of consultation processes on the project's progress it is useful to keep record about the number of people taking part in discussion or coming to meetings, and about information materials taken or questionnaires answered by participants. It is also important to precisely ask: Does the consultation result in any actions? Does it have consequences for the further development of the project?

## Level 3: Partnership, Co-determination

This level of participation includes an official means of cooperation that has been agreed upon by all parties involved. Joint boards or committees as well as specific modes of cooperation are established and cannot be changed unilaterally. Given this framework, representatives of the target group(s) or stakeholders take part in meetings and decision-makers confer with their target groups about the project development. Thus, co-determination means that there are negotiations between target groups, stakeholders and power holders in which citizens have a say. However, the representatives of any interest group cannot make final decisions.

This rung of the ladder often seems to be a concession in the face of manifest citizen discontent. Negotiations are usually not pro-actively offered by decision-makers but are instead called for by stakeholders. Many members of the public have had negative experiences with policy makers and now claim attention for their interests.

Whenever this stage of participation is a goal, some criteria for assessing whether the effort is a success should be developed. For example, the following aspects could be analysed: Who implemented the negotiation mechanisms that are being used? How do target groups and decision-makers cooperate? Are there any tools for resolving conflicts or impasses?



## **Level 4: (Partly) Delegated Power**

On this rung of the ladder, the integration of target groups into the decision-making process has a legal basis which defines the scope and structure of participation. This can result in citizens achieving dominant decision-making authority over a particular plan or programme, or representatives of target groups gathering a majority of votes in decision-making procedures.

Intensified participation can have many advantages for policy makers. If they are able to delegate their power during the process of project development and implementation, the obvious positive effects are at least twofold: (1) The power holder is freed from responsibilities and (2) acceptance of decisions among target groups is almost guaranteed. Still, most decision-makers will want to retain their influence over project development. Therefore, delegated or shared competences will remain restricted to specific aspects. In any case, for evaluation of the scope of delegated power in a participation process it is important to assess the power and influence of stakeholders in the decision-making process, the organisational tools used for the implementation of citizens' power, their right to veto decisions and, of course, the range of topics handed down to stakeholders or citizens for their exclusive direction.

## **Level 5: Citizen Control, Self-organisation**

Self-organisation can result from the public's particular concern or disappointment about the previous treatment of a certain matter, with citizens ending up forming their own interest association. This means that all major aspects of the project are determined by the stakeholders. All aspects of planning and implementation are decided by citizens, and responsibility for an action or project lies completely in the hands of the stakeholders.

Self-determination by citizens or stakeholders is of course the highest level of participation. Strictly speaking, it is not participation of citizens but a complete taking-over or handing-over of responsibility to stakeholders. This is, for example, the case if citizens are given the option to establish a water user's association (European Commission, 2003: 13). In the case of urban river revitalisation projects it is not very likely that participation processes will reach this rung of the ladder as the project is mostly initiated and administered by professionals. Thus, it is improbable to expect that the planning, policy-making, and managing of a revitalisation programme will be completely handed over to citizens.

## 2.3 Goals and advantages of public participation

It is often emphasised that the active involvement of stakeholders can improve the quality of both the planning process and the end decisions. But experience with public participation, or rather public non-participation in many cases, has proven to be unsatisfactory. The implementation of public participation has for a long time been understood as simply giving the public the legally necessary information. As a result public acceptance of such projects often remains low because people are involved (too) late, and feel poorly informed and not heard in major questions. According to the common perception only experts know where the important details of the projects can be found and only economically or politically potent stakeholders can influence the outcome of the decision-making. The man on the street has no say.

As the outcome of urban river revitalisation processes has a direct impact on citizens, the success of a revitalisation project is strongly linked to public acceptance and support. Therefore it is highly important to involve the public at every stage of the project and to start involvement from the beginning: “It is never too early” (European Commission, 2003: 17). It is not only legally necessary to involve the public but also very wise to do so: “Through participation, long term, widely acceptable solutions for river basin planning can be arrived at. This can avoid potential conflicts, problems of management and costs in the long term” (European Commission, 2008: 14).

Some of the goals and advantages of public participation elaborated in the context of the REURIS project are listed in the following. Public participation:

- increases public and political interest in the issue and awareness of the importance of rivers and streams in cities and of the manifold benefits of revitalisation projects,
- raises awareness of the demands of an integrative approach to river revitalisation by considering social, economic and ecological aspects simultaneously and increases the social and environmental responsibility,
- increases public acceptance and in that way avoids vandalism,
- capitalises on stakeholders’ expertise or local knowledge and experience and thus improves the quality of plans, measures and the project’s final outcome,
- speeds up planning and implementation processes,
- makes decision-making more transparent and creative,
- substantially improves public acceptance as well as commitment to and support for decision-making processes,
- helps to encourage voluntary and private activities or funding by private investors,
- increases mutual trust and understanding,
- makes implementation more effective with fewer misunderstandings or litigation and fewer delays,
- furthers citizens’ expertise, social involvement and communication capabilities,
- strengthens the ties between people and their community and to each other and fosters identification with the community and the project,
- reveals conflicts and makes it possible to identify the demands, needs and wants of the public at an early stage of the planning process, aids in finding solutions to these issues, and promotes the balancing of diverse interests, and
- helps to improve the quality of future public participation processes by giving all parties experience with the practice of participation.

## 2.4 State of the art: Evaluation of models of participation and cooperation

In order to learn from experiences and about the state of the art of public participation in urban river revitalisation, each project partner analysed and evaluated the methods and models of public participation and participative planning applied in their country ranging from legally required forms on the one hand to forms which go beyond the legally required minimum on the other hand.

The studies aimed at:

- analysing and evaluating the state of the art applied in the partners' countries as a basis for further development of participation tools,
- knowledge transfer between the partners, and
- compiling recommendations for improving public participation.

The studies mainly analysed:

- methods of public participation including participative planning, and
- models of participation and cooperation applied in the partners' countries.

## 2.4.1 Methods of public participation

The methods of public participation are typically classified by the degree to which participants can influence the final decision. Arnstein's (1969) ladder of participation describes these approaches in an ascending order of public involvement and power levels ranging from information supply to consultation and inclusion of target groups to partnership and co-determination to (partly) delegated power to citizen control and self-organisation (see chapter 2.2.2).

There are many specific methods available. Table 2.4-1 lists only a selection, and the list is not intended to be exhaustive. A typical communication strategy encompasses a combination of these methods in accordance with the needs of the given project and the local conditions. Some of the methods follow a defined procedure and various procedural steps. They are marked by \*.

Table 2.4-1: Methods of public participation used in Poland, the Czech Republic and Germany (x = commonly used method, (x) = occasionally used, possible method) (© REURIS project team).

Methods at different levels	Poland	Czech Republic	Germany
<b>Information</b>			
Municipal authority board, announcement in the official gazette	x	x	x
Public presentation of projects and plans	x	x	x
Public display (formal)	(x)		x
Printed materials: leaflets, flyers, etc.	x	x	x
Newsletters	x	x	x
Press releases and press conferences in local print media	x	x	x
Local television and radio	(x)	x	(x)
Internet applications (websites, social networks)	x	x	(x)
Exhibitions of photographs, before/after comparisons, children's drawings, plans, etc.	x	x	x
Happenings, events	x	x	x
<b>Consultation, Inclusion of Target Groups</b>			
Questionnaires and surveys	(x)	x	(x)
Site observation and structured interviews with residents	x	x	(x)
Mapping: citizens' maps, problem maps		x	x
Structured visioning		x	
Round tables*	(x)	x	x
Town hall meetings with discussions or panel discussions	x	x	x
Telephone interviews, personal interviews	x	x	x
Internet applications (e-voting, e-participation*, social networks, etc.)	(x)	x	
Projects and drafts available for inspection with opportunities to make comments	x		x
Citizens' forum*			x
<b>Partnership, Co-determination</b>			
Workshops	x		x
Working groups	x	x	x
Community planning meetings		x	
Student workshops with university students	(x)	x	
Round tables*	(x)	x	x
Internet applications (e-voting, e-participation*, social networks, etc.)		x	(x)



<b>(Partly) Delegated Power</b>			
Citizen advisory group	(x)	x	
Community visioning		x	
Referendum*	(x)		x
Planning Cell*			(x)
<b>Citizen Control, Self-organisation</b>			
Referendum*		x	
<b>Other forms of participation</b>			
Citizen panel*			x
Future Search Conference*		(x)	(x)
Future scenarios*	(x)	(x)	
Future City Game*	(x)	(x)	
Open Space Event*		(x)	(x)
Mediation process*			(x)
World Café*			(x)
Future conference*			(x)

**Round tables** are often used by citizens to initiate a free discussion in search of solutions to specific problems.

As a method for quick and easy public participation, **e-participation** methods are relevant. Participation servers moderate the issue and make note of contributions from the actors involved.

In general, a commission made up of 20 to 25 persons (often chosen by random sampling) is called a **Citizens' Forum** that considers specific questions and develops an expert opinion that is presented to the public as well as to political actors. This way of including the public via intermediaries allows for representation of the views of all parties concerned in the decision-making process.

A **referendum** is an instrument of direct democracy in the Czech Republic, Germany and Poland in which an entire electorate is asked to either accept or reject a particular proposal. Referenda can be initiated at the will of a public authority or at the will of the citizens according to country-specific rules.

The **Planning Cell** or planning cabinet is strictly concentrated on one task and only works for a defined period of time. A randomly chosen group of adults is released from their occupational duties for the duration of the planning cabinet. The planning cell develops solutions for problems that occurred during the planning process. The results are collected in a so-called *Bürgergutachten* (citizens' expert report) that contributes to the decision-making process.

The **Citizen Panel** is based on a representative sample of eligible voters who are questioned about local issues by post or Internet. The aim of setting up a citizen panel is to establish an effective dialogue between political actors and their constituency.

**Future Search** is the term for a planning meeting which allows people to work together even in difficult situations. During three days, groups of 60 to 80 people with different backgrounds meet in one room and more than one hundred people meet in parallel rooms. They share their experience and work on common action plans.

**Future scenarios** are a participatory method (such as scenario workshops) for facilitation of thinking about the future. Scenarios are considered in an effort to avoid getting the future wrong in fundamental ways, allowing for better preparation for change and uncertainty. Scenarios should be drawn up to provide insight into particular questions, such as: "What should we do about this possibility? What is the likely range of variation on this scenario? Do we want to encourage it or discourage it, and do we have the tools to do so?" etc. This method helps communities think about dependency, vulnerabilities and ways to prepare for the future. The method develops organisational capacity and encourages internal democratic processes and planning. As a rule, community leaders become more vocal and assertive in meetings with

---

local government, and marginalised groups within communities, such as women or the poorest segments, are able to make their voices heard.

The **Future City Game** was developed by the British Council, the Centre for Local Economic Strategies and Manchester's Centre of Urban Life. During this one- or two-day event, inhabitants from different backgrounds and representing different disciplines and outlooks assemble with one common aim: generating the best ideas of how to improve the quality of life in the city. The Future City Game encourages creative thinking and aims at identifying the best possible ideas addressing long-term challenges. The Future City Game is led by a trained leader. Players compete in teams to develop their ideas. The particular idea can be anything (a policy, service, product, building or behaviour) but it must be innovative, forward-thinking, relevant to the local community, and finally, achievable and sustainable. At the end of the game, the results are presented to local community members, experienced practitioners as well as the city administration, and everyone involved votes on the best ideas (British Council, 2008-2011).

The **Open Space Event** got its name from the Open Space Technology by Harrison Owen. It describes different kinds of meetings which have in common that there is no pre-determined agenda, but only a general framework. Instead, the agenda is set by the participants during the meeting. The only elements which are required in advance are a clear topic, interested participants, time, a place, and a leader (Owen, n.d.).

**Mediation** is a method to solve conflicts between at least two parties with the help of a conciliating person, the mediator. It is a voluntary process which aims at finding a consensus by negotiation under consideration of all conflict parties' interests.

As a conversational process based on a set of integrated design principles, the **World Café** is an innovative methodology for hosting conversations about questions that matter. These conversations link and build on each other as people move between groups, cross-pollinate ideas, and discover new insights into the questions or issues that are most important in their life, work, or community. As a process, the World Café can evoke and make visible the collective intelligence of any group, thus increasing people's capacity for effective action in pursuit of common aims (World Café, n.d.).

A **Future Conference** (German: *Zukunftswerkstatt*, after Robert Jungk) is a method to initiate unrestrained fantasy in order to generate new ideas for addressing social problems. The future conference is phased into a process of criticism, a so-called process of dreams and a process of realisation. The latter is dedicated to working on realistic solutions to the problems defined earlier. The *Zukunftswerkstatt* is mainly used in local or regional contexts. Local communities and administrations use it as a method of involving the citizens in urban planning processes.

## 2.4.2 Models of public participation used in Poland, the Czech Republic and Germany

### 2.4.2.1 Models of public participation in Poland

#### Public participation as required by law

##### Description

Public participation should be carried out in cities as an element of creating all kinds of documents or strategies of development with the participation of the inhabitants. Public participation is organised in order to increase the quality of public life and clarity of policy-making at the commune level by developing and strengthening citizens' participation in the process of making important decisions that affect the inhabitants. Increasing civil activity and engagement, and as a result development of the commune, is made possible by the openness of local government authorities to social partners by accepting the regulations defining the place of citizens in the decision-making process, preparing the budget and making decisions about public expenses.

In Poland, public participation is often understood only and exclusively as a “social consultation”. Social consultation or public consultation is a regulatory process by which the public's input on matters affecting them is sought. Its main goals are in improving the efficiency and transparency of, and public involvement in, large-scale projects or the making of laws and policies. This usually involves notification (to publicise the matter to be consulted on), consultation (a two-way flow of information and opinion exchange) as well as participation (involving interest groups in the drafting of policy or legislation). Thus, these “social consultations” can be carried out at different levels. Consultation is the two-way exchange of information between municipal representatives and the public before decisions are made. It is an open and accountable process allowing individuals and groups to participate in the decision-making process of the municipality.

In the following discussion, the term “public participation” is used in order to allow comparison with practices in the Czech Republic and Germany. Public participation in Poland is carried out as per the requirements of EU directives. However, there is little specific guidance within the legal system clearly setting out how participation should be carried out. However, the few relevant legal acts do contain some information about how public participation should be carried out. These legal acts relate to:

- the advisory and consultative powers of social groups,
- public participation in the various areas of public policy,
- the functioning of public institutions operating in the advisory setting, and
- permission to participate in the process of consultation.

Relevant European Union directives include:

- Directive 2003/35/EC of the European Parliament and the Council of 26 May 2003 which provides for public participation in respect to the drawing up of certain plans and programmes relating to the environment, and amended Council Directives 85/337/EEC and 96/61/EC which relate to public participation and access to justice,
- Directive 2001/42/EC of the European Parliament and the Council of 27 June 2001 on assessment of the effects of certain plans and programmes on the environment,
- Directive 2000/60/EC of the European Parliament and the Council of 23 October 2000 which establishes a framework for Community action in the field of water policy, in short the Water Framework Directive.

---

Polish acts:

- Act on the release of information about the environment and its protection, public participation in environmental protection and environmental impact assessment dated 3 October 2008,
- Act dated 27 April 2007 r. Environmental protection law,
- Act dated 18 July 2001 r. Water Act,
- The Constitution of the Republic of Poland of 2 April 1997, and
- Act on spatial planning and development dated 27 March 2003.

## **Evaluation**

The most popular form of public participation in revitalisation projects in Poland is social consultation. They are conducted on the basis of EU law and the provisions of Polish law. In Poland there are legal frameworks, but there are no habits and tools for the integration of the public in the process of social consultation. Social consultations are often just a formality and are viewed by the administration as a nuisance rather than as a source of information.

## **Non-statutory models of participation and cooperation**

### **Models used by public authorities**

#### *Description*

In Poland, cooperation among public administration representatives occurs at the level dictated by law (national administration) and at a less formal level (local government) between various departments within a single authority, or between public administration authorities at the national, regional and local levels.

One of the most common forms of public participation in Poland is a referendum (but this tool is rarely used for projects related to urban land use change or river revitalisation). In Poland, the most-used methods are negotiations, meetings, various types of personal verbal and written consultations, steering groups, working groups and production committees.

#### *Evaluation*

The hierarchical structure of public authorities typically means that individual administrators have relatively firmly set decision-making competences. On one hand this makes the decision-making process easy to follow, while on the other hand it allows for very little flexibility in terms of changing opinions and also little openness for communication. The strengths and weaknesses of the forms of cooperation used in Poland between city halls and the public, and even between departments inside city halls, are listed in Table 2.4-2.



Table 2.4-2: Strengths and weaknesses of the cooperation forms used in Poland (© CMI Katowice).

Strengths	Weaknesses
<ul style="list-style-type: none"> <li>• Respected deadlines</li> <li>• Respected procedures</li> <li>• Openness and willingness to cooperate between departments and external institutions (within working hours)</li> <li>• Substantive competences</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of interpersonal contact</li> <li>• Difficulties in the flow of information, sometimes even concerning documents</li> <li>• Lack of internal agreements (procedures, instructions), cooperation between municipal departments and cooperation with external institutions</li> <li>• Potential lack of established cooperative models</li> <li>• Lack of consequences for not making a decision</li> <li>• The city management system evokes defensive behaviour due to an authoritarian city management system</li> <li>• Real work overload</li> <li>• There is no electronic information system: duplicating everything on paper with a stamp</li> <li>• Unclear competences between departments and budget units or city companies due to excessive dispersion of competences</li> <li>• The dominant and sometimes only form of cooperation and exchange of information is the official circulation of documents; there is a lack of consultations, working meetings, though sometimes they are organised ad hoc</li> <li>• Unfavourable attitude to the social factor, lack of elaborated methods (horizontal and vertical) for interaction with the public and non-governmental organisations</li> <li>• Lack of mechanisms (including lack of knowledge about them) that motivate administrators to work for the city, lack of engagement</li> <li>• Lack of permission to work overtime</li> <li>• Lack of acceptance and social support for performed work</li> <li>• Legislative mistakes which increase difficulties in the continuity of spatial planning</li> <li>• Common misinterpretations of law, interpretative mistakes</li> <li>• Incorrect permits issued by different departments without consultations</li> <li>• Lack of social agreements concerning the spatial range of the plan</li> <li>• No realisation of the possibilities allowed by legislation; unused possibilities for creating protection plans as a result of a lack of cooperation between departments</li> <li>• There is no system for electronic cooperation and exchanging information</li> <li>• Resolution concerning social consultations is difficult due to a lack of information about the range, issuing date, etc.</li> <li>• Cooperation comes down to creating a City Development Strategy; there is a lack of operational programmes and lack of permission for operational programmes</li> <li>• Lack of formalised procedures for cooperation between the Council and administration (i.e., a lack of a separate cooperation forum)</li> <li>• Lack of fundamental information on the website, resulting in a lack of information for inhabitants</li> <li>• Lack of elaborated forms; nobody feels the need to cooperate</li> <li>• Cooperation is incidental, typically from one contract to another (in these situations cooperation is often successful)</li> <li>• Lack of topical “round tables”</li> </ul>

---

## **Models of cooperation between City Hall Departments and/or dependent subjects**

### *Description*

Decision-making and planning in a single town or city is usually hierarchical. The boards and committees are a type of working group composed of administrators and assembly members, as well as citizens in smaller communities. Boards are established by the municipal council as initiatory and advisory bodies.

The Development Department cooperates with particular organisational units of the City Hall regarding work connected with the all important documents. Cooperation with other departments is carried out within projects connected with city revitalisation and elements of spatial planning. The City Development Department also cooperates on a daily basis with dependant departments and subjects regarding realisation of city investments. Moreover, the Department consults on proposed changes to local spatial development plans, drafts of strategic development documents (at the metropolitan, regional, and national levels) and applications for purchase or sale of areas concerning city investment plans. The Department takes part in meetings of the documentation coordination team. This is a team to which investors submit drafts of the documentations of planned enterprises. These are activities stemming from good clerical practice. Elected representatives naturally have access to the various forms of public administrative action described above (such as meetings, working groups, production committees, etc.).

### *Evaluation*

The outcomes of planning processes in which public administration representatives and politicians participate are usually clearly structured (with specifically defined tasks, responsibilities, deadlines) and have firm rules and procedures. But there is relatively little flexibility for changes of opinion and little openness for their communication.

## **Models of cooperation between City Hall and the City Council and/or members of Auxiliary Councils of city districts**

### *Description*

Interaction between a public administration authority and supporting councils of self-government units often requires an individual approach. The representatives of Councils are still not experienced with or are not interested in sharing the visions and plans publicly. Therefore they prefer involvement in activities that enable the sharing of opinions between a limited number of participants such as questionnaires, surveys, structured interviews, working groups and roundtables. Working for long-term, strategic development planning includes, among other things, long-term investment planning. City councillors, as representatives of city supporting units through particular departments, report the investment needs of the inhabitants of their districts and this guides the writing of the city budget.

### *Evaluation*

Although the representatives of councils are not used to sharing the visions and plans, they increasingly see that public consultations are important in the planning processes. Therefore, they increasingly engage in the consultation process, by which they are gaining knowledge and experience in this area.

---

## **Models of cooperation between the City Council or City Hall and other administrative organs, experts, economic actors, non-governmental organisations engaged in environmental subjects and private local stakeholders and their communities**

### *Description*

In the process of planning projects related to the redevelopment of urban space, modelling primarily involves a group of experts composed of representatives of the employees of the municipality, architects, urban planners, the scientific community, and city residents. The method of actively involving the public in the planning process in Poland is still “crawling”, but more and more city residents can take part in discussions about planning documents.

During the work on guidelines for the development of urban space workshops are organised with the broad participation of local communities. The purpose of the meetings is to learn the public’s preferences of the future image of the city centre. The work takes place with the use of participatory methods. For instance, all participants will have the same right to vote. It is assumed that each participant in the workshop actively takes part in the work. All decisions are taken by consensus during the workshops, including work in sub-groups composed of citizens and experts, panel discussions, polls, voting and discussion sessions moderated by the moderator.

### *Evaluation*

In Poland these methods of public participation have not been widely disseminated. Many activities and processes are supported by civic associations and non-governmental organisations, which lead these gatherings in an informal atmosphere. In one way, from these activities public administration authorities receive relatively strong feedback about residents’ opinions about revitalisation processes or other projects connected with the development of urban space. But on the other hand, the open and informal character of meetings with participants can sometimes lead to high expectations, which can subsequently be left unfulfilled if the public’s proposals are not implemented or there is a long lag between planning and implementation.

## **Conclusion and recommendations**

Social consultations should be carried out in cities as one aspect of drawing up the various types of development documents or strategies with the participation of the inhabitants. Social consultations are organised in order to increase the quality and clarity of public life at the level of the commune as well as the development and strengthening of citizens’ participation in decision-making. Increasing civil activity and engagement, and as a result positive development of the commune, is brought about by the openness of government authorities to the public by complying with the regulations defining the place of citizens in the decision-making process, preparing the budget and making decisions about public expenses.

The process of conducting social consultations in Poland needs to develop. For instance, a system of legal solutions, clearly setting out how officials should involve the public, should be established. Above all, an appropriate commitment to public involvement and a change of mindsets on the part of both policy makers and the public are required.

The following recommendations are intended to contribute to changes in practices that will improve the quality of public consultation in decision-making processes:

- the public should be involved in the decision-making process,
- city officials should dedicate an appropriate amount of time to provide information to the public, gather opinions and answer questions, which should be adapted to the scale of the problem,

- 
- documents and materials which are produced as a result of the consultation should be correct, understandable and should contain a summary in non-technical language, and all questions and comments about documentation should be clarified by experts,
  - the social consultation process should be open to broad group of stakeholders, and
  - at the conclusion of the public participation, information about the meeting(s) and results of the process should be transferred to all the actors involved.

## Summary

Social consultations and cooperation between public authorities (e.g. city halls) and local inhabitants, as well as NGOs, along with cooperation between City Hall departments, function in Katowice and Bydgoszcz at a relatively good level compared to the rest of the country. In this study, the general principles of participative planning were discussed and the basic typology of stakeholders interacting within participative planning, their relations and types of interactions were presented. These include:

- interaction with City Hall departments and/or dependent subjects,
- interaction between City Hall and the City Council and/or supporting councils of self-government units, and
- external interaction of the City Council or City Hall with other administrative organs, experts, economic actors, non-governmental organisations engaged in environmental issues and private local stakeholders and their communities.

In addition, this chapter presented examples of the intensity of participation by local entities in planning (ranging from information supply to consultation and inclusion of target groups to partnership and co-determination), the most frequent methods of participative planning and their strengths and weaknesses and examples of public participation in practice. For the Polish REURIS partners, the general approach to cooperation between the city, local inhabitants and other organisations is not bad, but the cooperation model should be improved.

The process of public participation depends on the local context, the experience of the participating parties and the expectations of all parties. In Poland, the application of participatory tools tends, for the time being, to result in the collection of information rather than empowering the public to have a real impact on decision-making processes. The intensity of the process typically involves communicating and, from time to time, giving the opportunity to negotiate.



## 2.4.2.2 Models of public participation in the Czech Republic

### Public Participation as required by law

#### Description

In the Czech Republic participative planning came into use after 1989 for obvious reasons, initially through various international programmes, particularly from the USA, Great Britain and other Western European countries. Strategic and community planning methods at the town and city levels were used and developed through these programmes. Efforts to apply Local Agenda 21 in the Czech Republic also stimulated use of participatory methods, as did the country's accession to the European Union in 2004 and accompanying EU pressure to involve all relevant partners and the public in development of planning documents and projects funded through the EU.

In the Czech Republic, information provision and the right to information are governed by the following legislation:

- Act No. 106/1999 Coll., on free access to information, and
- Act No. 123/1998 Coll., on the right to environmental information.

#### *Land use planning*

By law all construction projects and significant changes in an area must adhere to the valid land use plan. The public can influence development of and amendments to the land use plan during the phases of the land use plan approval process, which include commissioning the plan, the land use plan concept and the proposed land use plan. Land use planning and public participation in land use planning are governed by Act No. 183/2006 Coll., on land use planning and the building code (the Building Act).

In the first step, i.e. approval of the commissioning of the land use plan, the public can only submit written comments. In this phase it is also possible to suggest an environmental impact assessment of the land use plan or request development of an alternative land use plan concept.

In the second phase, the land use plan concept, there is a public hearing. The commissioning authority issues a public decree announcing the place and time of the public hearing along with an explanation of it no less than 15 days in advance and ensures that the land use plan concept is available for public viewing at the commissioning authority's offices and in the given municipality for a period of 30 days from the day of delivery of the public decree. Anyone can submit comments during the 15-day period following the public hearing, property owners can submit objections and affected public authorities and agencies can submit their positions. The commissioning authority simply acknowledges the comments but must take decisions on objections and justify these decisions.

There is another public hearing during the proposed land use plan approval process. This is the final opportunity for citizens to submit comments, property owners to submit objections and affected public authorities to submit positions. The land use plan may be approved by the municipal assembly only after all comments from citizens and affected public authorities have been processed and potentially incorporated. Upon its approval it becomes an official document.

“Public representatives” may serve as intermediaries for members of the public, facilitating participation by reviewing the land use plan concept or proposal with the authorisation to submit objections. Their role is prescribed by the Building Act. They may represent the public when at least one-tenth of a municipality's inhabitants, who would like to submit the same comment, delegate them to do so.

---

### ***Zoning and building permits***

Land use planning documentation is the fundamental basis for locating construction projects. All construction projects are subject to a process that examines the given project in relation to protection of public and private interests. The first phase is the zoning permit process, which is managed by the relevant building department. This process includes a public hearing, which any citizen may attend and where any citizen may give comments. It is also the last opportunity for permit process participants to submit objections and for public authorities to submit positions.

Public participation in the entire zoning permit process is open to entities who are “permit process participants”, i.e. individuals directly affected by the project or civic associations. A civic association may become a participant on the basis of the nature and landscape protection law. A permit process participant may submit objections during the zoning permit process and participate in public hearings.

A specific construction project on a specific property is then approved through a building permit process. The building permit process is open only to process participants, who may once again submit objections along with relevant public authorities who issue positions.

### ***Assessment of environmental impacts – EIA***

Large construction projects and other extensive activities and technologies that may significantly affect the character of an area are subject to an environmental and public health impact assessment. This process is abbreviated as EIA (Environmental Impact Assessment). Through this process, citizens have the opportunity to influence the preparation phase of large plans. The fundamental legal regulation for the EIA process is Act No. 100/2001 Coll., on assessment of environmental impacts. Public participation in the EIA process is ensured in the following ways:

- The public authority is required to regularly publish information on the results of each stage of the process.
- Citizens may influence the plan through comments, communication with the author of the documentation or assessment, or consultation with the relevant authority.
- Anyone may participate in the process by submitting a written statement or participating in a public hearing. The only condition for participation is adherence to the legally prescribed time periods.
- If the authority receives a statement objecting to the documentation or assessment, it is required to secure a public hearing on the documentation or assessment. Again, anyone may express comments on the documentation or assessment at this public hearing.

### **Evaluation**

The aforementioned planning methods are prescribed by law and are an essential part of implementation of any type of construction or development plan. Their primary weakness is that they are limited by time and the manner of involving partners. These legal processes often take on a rather formal character, do not allow for the creative potential of participative planning and are often the source of conflicts. This can be avoided by timely application of preventative, voluntary planning processes that focus on cooperation and shared delineation of the nature of the project or plan.

---

## Non-statutory models of participation and cooperation in Czech Republic and the Cities of Brno and Pilsen

### Models used by public authorities

#### *Description*

In the Czech Republic, cooperation among public administration representatives occurs at the level dictated by law (national administration) and at a less formal level (local government) between various departments within a single authority, or between public administration authorities at the national, regional and local levels. The most commonly used methods are various types of personal verbal and written consultations, negotiations, meetings, steering groups, working groups or production committees (see below).

#### *Evaluation*

The hierarchical structure of public authorities typically means that individual administrators have relatively firmly set decision-making competencies. On the one hand, this makes the decision-making process easy to follow, while on the other hand it allows for very little flexibility in terms of changing opinions and also little openness for communication. The hierarchy and inward focus in each department sometimes lowers the connectivity and complexity of plan assessment and can make it harder to coordinate planning and implementation of plans. Authorities often lack an independent management element for planning processes because of the established decision-making structures and also for organisational and financial reasons.

### Models used by public authorities and politicians

#### *Description*

Decision-making and planning in a single town/city is usually hierarchical, starting at the top with the mayor (in the case of statutory cities like Brno and Pilsen, a lord mayor), followed by the municipal assembly, the municipal council, council boards (assembly committees), the municipal authority, the secretary and departments of the municipal authority. The boards and committees are a type of working group composed of administrators and assembly members, as well as citizens in smaller communities. Boards are established by the municipal council as its initiatory and advisory bodies. Typically the work of a board is focused on a particular aspect of municipal development. Brno has the following boards that approve revitalisation projects: development, investments, environment, property, transportation and technical infrastructure. Pilsen has the following boards that discuss and approve projects for revitalisation: environment, presentation of city and tourism, conception and development and transport.

Committees are established by the assembly as initiatory and control bodies and they present their proposals to the assembly. The law mandates the responsibility to always establish a financial and a control committee (Brno also has an ethnic minorities committee, and Pilsen has a committee for contracting of tender). Both boards and committees have relatively firmly defined positions in the municipal management system and rules governing their operations and actions.

Elected representatives naturally have access to the various forms of public administration action described above (meetings, working groups, production committees, etc.).

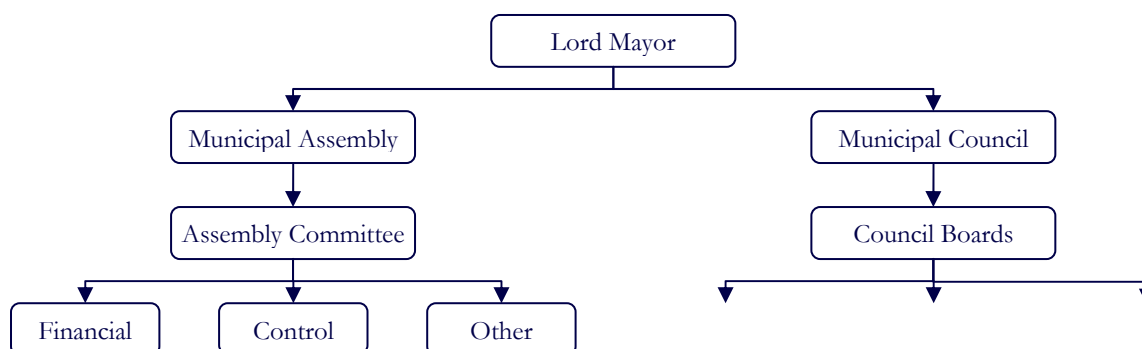


Figure 2.4-1: Organisation of decision-making and planning in a town/city in Czech Republic (© City of Brno, Urban Planning and Development Institute of the City of Pilsen).

### ***Evaluation***

The outcomes of planning processes in which public administration representatives and politicians participate are usually clearly structured (specifically defined tasks, responsibilities, deadlines) and have firm rules and procedures. Once again, however, there is relatively little flexibility for changes of opinion and little openness for their communication. The absence of an independent managing entity for the planning process holds true here, too, due to the prescribed decision-making structure and organisational and financial reasons.

## **Models of cooperation between public administration and important local actors**

### ***Description***

Interaction between a public administration authority and local actors often requires an individual approach. The representatives of private and public institutions in the Czech Republic are still not used to or are not interested in publicly sharing the visions and plans of their own organisations. Therefore they prefer involvement in activities that enable sharing of opinions between a limited number of participants such as questionnaires, surveys, structured interviews, working groups and roundtables. Production committees, which are meetings of public administration representatives with a public tender contractor focused on intermittent assessment and potential changes to the document being developed, may be considered as a type of participative planning by these actors.

### ***Evaluation***

Since contact with local actors in these methods is quite close, it is possible to obtain relatively structured and clearly formulated information. The information, opinions and plans have typically already been preliminarily formulated within the institution represented by the individual and as such have a more permanent character.

However, this also implies a small degree of sharing of opinions and little opportunity to change opinions. There is no creative interaction with other actors in the planning process. Local actors are not accountable to voters or citizens but instead to their employers, shareholders, general meetings, etc. Public opinion serves them merely as information. They are also usually not inclined to try innovative planning methods because of time constraints.



---

## Models of cooperation between public administration and local actors and the public

### *Description*

The final and most broadly perceived group of actors (target group), namely the general public, enables use of the broadest spectrum of methods. In addition to the entire usual array of information provision methods, the following methods are most frequently used in the Czech Republic: questionnaires, surveys, interactive exhibits, roundtables and panel discussions. More demanding methods such as site observation and mapping and structured interviews with residents are used less often. More innovative methods are usually used in less weighty processes focused on long-term but not firmly set goals and in processes concerning education, culture, social issues, etc.

The City of Brno uses in particular questionnaires and surveys that are distributed through its monthly magazine, *Metropolitan*, on its Internet portal and through the Urban Centre. This public information centre hosts exhibits and public discussions on the city's most important development projects (such as renovation of the main square, revitalisation of parks, etc.).

The City of Pilsen uses in particular questionnaires and surveys that are distributed on the Internet website of the city and through *Pilsen City Magazine*. In this magazine, citizens find much useful information about interesting projects that are being prepared and realised in Pilsen.

### *Evaluation*

Development plans that may impact a broad group of actors usually have the greatest number of participants. In these processes, there is a certain degree of anonymity that facilitates opinion sharing by even those individuals who find it difficult to speak up for various reasons. Many activities and processes are supported by civic associations and non-government organisations, which lend these events an atmosphere of informality, which in turn fosters the emergence of new, novel ideas. This gives public administration authorities relatively strong feedback about residents' opinions on urban development or a given project.

However, the involvement of a great number of actors requires adequate financial and human resources to manage and the cooperation of external organisations to implement the process. With regard to the range of participants and use of methods, which do not always allow personal contact, the information gathered is usually less structured. The open and informal character of such processes can sometimes lead to high expectations, which can subsequently be left unfulfilled if the public's proposals are not implemented or there is a long wait between planning and implementation, etc.

## Conclusion and recommendations

The basis of any longer-term planning process is the establishment of a plan for public/partner participation or a communication strategy, which should be based on the project goal, the time available/deadlines, local actors' knowledge and an estimate of key phases of the project.

Such processes are demanding in terms of time, funding and organisation and require openness, trust, an effort to find consensus and an informal approach. Participative planning processes typically require one coordinator (such as a department of the local municipal authority, a responsible politician or private entity, a school or NGO) while more complicated processes often benefit from the consulting services of an experienced, independent institution (such as an NGO, university or firm). Public participation, however, clearly improves the project's final quality, results in the input of local knowledge and helps to develop citizens' expertise and social and communication capabilities, while also strengthening their ties to their community and to each other.

## Information provision

This level of cooperation and planning is covered by a relatively broad spectrum of methods in the Czech Republic (including municipal notice board, local newsletter, brochures, local television, radio, website applications, etc.), particularly in larger cities. In smaller communities, this spectrum is significantly limited due to funding and staff capacity limitations, but there are often closer personal relationships and more direct communication between participants.

Strengths in this area in the Czech Republic include:

- a growing standard of quality of graphics and text in informational materials,
- increasingly interactive character of website applications (use of surveys, voting, etc.),
- increasing use of modern communication tools (text messaging, e-mail),
- maintenance of traditional communication methods in small communities (such as the local public announcement system), and
- in some cases, cooperation with professional organisations focused on public information provision and participation.

In Brno in recent years the quality of information provision to citizens has markedly improved due to the new format of the monthly *Metropolitan* magazine (expanded columns, more interactive sections, higher graphic standard, etc.) and the city's Internet portal (easier to navigate). The aforementioned Urban Centre also plays an important role in this regard (by distributing brochures and hosting exhibits). Unification of the overall graphic design of materials funded by the City of Brno has also increased the level of public awareness. Printed newsletters are a relatively favoured and oft-used medium at the city district level, too.

Pilsen has many channels of communication with citizens. The most important tool is the city website. Here visitors find news about city events and the TV section "Plzeň v kostce", which summarises the most important events of the current week in Pilsen. The website was changed three years ago because of the need to be friendlier to citizens and visitors. The other important channel of communication is the *Pilsen City Magazine*. It is published in a run of 75,000 copies and citizens receive it to their letterbox every two months. It is also possible to download the magazine in electronic version through the city website. Pilsen is a big city and for this reason each city district also has its own magazine that informs residents about current news in the area.

Weaknesses in this area in the Czech Republic include:

- insufficient knowledge of information provision techniques on the part of public administration representatives,
- overly formalised, administrative character and unimaginative graphic and written aspects of the information being provided,
- delayed provision of information or informing after the fact (about events already implemented),
- inappropriate use of information provision tools in written form (due, for example, to paper and resource waste, overflowing mailboxes, high degree of competition from advertising materials, passive and untargeted distribution means),
- little use of instruments such as happenings and public presentations, and
- insufficient communication capability with the private and business sectors.

Distribution of *Metropolitan*, Brno's monthly, and city district newsletters is inadequate. The Urban Centre is in the centre of the historical city but it is not easily accessible or visible from the street. The main disadvantage of the *Pilsen City Magazine* is its out-of-date issues because of its bimonthly publication interval, with a one month topic deadline. This situation will be changed during autumn 2011 because the city plans a monthly edition of this magazine.

## Consultations, shared decision-making and community planning

The most frequently used techniques are questionnaires, surveys, roundtables, panel discussions and various types of working groups. Planning methods based on participation of all types of actors (target groups), which lead to deeper discussion, opinion exchange, debating and assessment of options, alternatives, etc., are used less frequently. This approach to planning is used more commonly by non-governmental organisations or universities than by public administration authorities.

Strengths in this area in the Czech Republic include:

- existence of tools using planning techniques at the national level (support of Local Agenda 21, support of the National Network of Healthy Cities, etc.), and
- existence of several non-governmental organisations working on development and the application of various planning methods (such as Agora Central Europe, the Centre for Community Work, the Partnership Foundation and others).

The City of Brno has used surveys and questionnaires distributed through its monthly *Metropolitan*, its Internet portal and the Urban Centre with relative success. There is a relatively large spectrum of non-governmental organisations and education institutions in the city that supplement the public administration's activities by holding roundtables, panel discussions, exhibits, etc., on a variety of topics.

For communication with citizens, the City of Pilsen primarily uses surveys and questionnaires distributed through the *Pilsen City Magazine*, city district magazines and the city website. In Pilsen, many citizens' associations are proactive and municipal authorities liaise with them during the preparation and planning of big investment projects. According to Czech law, all plans are negotiated with affected citizens during the stage of applying for planning and building permission.

Weaknesses in this area in the Czech Republic include:

- the predominance of methods offering only plan consultation,
- inappropriate timing of planning methods which limits their potential use as a preventive conflict resolution tool, and
- insufficiently thought out public participation plans and communication strategies for large, complicated projects (e.g., land use plans, transportation construction projects and large, long-term projects).

In addition to its unsuitable location, the Brno Urban Centre's office space is not ideal for holding interactive forms of planning (due to insufficient capacity and flexibility of spatial arrangement, lack of working tables and not enough rooms). Other city buildings are also poorly designed for these purposes. Brno's great problem is the absence of procedures, or poorly thought out procedures, for large construction projects (such as high speed roads) and plans (new land use plan).

## Recommendations

Optimal implementation of participatory projects is ensured if the following criteria are met:

- All potential target groups are involved in the project.
- There is a clear, externally presented public participation plan with clear timeframes.
- Various modes of addressing the public are used in communication, information dissemination and participation.
- The project leader (implementation team) is familiar with participation principles and methodology, and understands them and accepts them.
- An external consultant with sufficient experience in public participation, communication and facilitation of public meetings is part of the participation process.
- Over the course of the project, citizens are able to find out how the project is developing and how their opinions are being used.

- 
- The property owner(s) unconditionally consented to the project aim and accepted responsibility for maintenance.
  - The proposed site design fulfils the needs of multiple target groups (it does not offer only one function).
  - The initial initiative comes from the bottom up, not only from the top down.
  - The project at least indirectly leads to further activity.

## Summary

Urban river revitalisation projects in the Czech Republic have general public support, particularly when they bring specific, positive changes to an area that can be used by citizens themselves (such as recreation areas, cycling trails, parks, etc.). Usually, though not always unanimously, there is public support for flood prevention projects. The public typically shows little interest in projects that lie beyond city limits, do not bring visible changes to residents' quality of life or have a purely water management or predominantly environmental protection character.

Information provision to citizens by towns and cities in the Czech Republic functions fairly well, but works less well in projects where the investor is the river management authority. In rare cases information is provided "ex post", i.e. after the final project has been implemented.

The situation in the Czech Republic is changing in general and elements of participative planning are being introduced into river revitalisation projects. With regard to trust and the degree of participation by various actors in any given project, it is important to set up a systematic and comprehensive communication system. In the Czech Republic the National Network of Healthy Cities is active in this respect, as it leads towns and cities to connect in a targeted manner a range of issues such as strategic, land use and community planning, project management and sometimes monitoring of urban development using sustainability indicators. Positive examples of this include the cities of Dobruška, Kroměříž and Vsetín.

In larger cities such as Brno and Pilsen, these processes are more difficult and sometimes work better at the city district level or when the project is important for the entire city. Recent examples in Brno include the planned renovation of public spaces of central importance (such as Zelný trh and Římské náměstí), important parks (such as Bjorsonův sad and the revitalisation of Černovice terraces), etc. In this regard, the revitalisation project of the Old Ponávka may be considered the first longer-term project to encompass public participation from the very outset. In Pilsen, a good example is preparation of new Master Plan for the whole city area.



### 2.4.2.3 Models of public participation in Germany

#### Public Participation as required by law

##### Description

In Germany, the requirements of the Aarhus Convention were implemented in national law by the Federal Freedom of Information Law (2005), the Law on Public Participation (2006) and the Law on the Right of Appeal on Environmental Issues (*Umweltrechtsbehelfsgesetz*) in 2006.

Public participation and the participation of public agencies in Germany are statutorily required in the context of formal licensing procedures such as planning approval procedures and environmental impact assessment with regard to concrete projects, by the Federal Building Code with regard to land use planning (such as the binding land use plan and preparatory land use plan) and in the context of water basin management plans (according to the EU Water Framework Directive).

The federal **Act on the Environmental Impact Assessment** states that in the context of both the environmental impact assessment and the strategic environmental assessment, public agencies have to be supplied with the relevant documents and are requested to give their written opinion (§ 7 and § 14h). The appropriate public authority is asked to provide relevant information to the project developer. It also ensures that the public is involved via public announcement, which has to be issued in the customary manner. Affected people have to be given the opportunity to make statements in written form and by word of mouth at a scheduled meeting. The decision taken has to be published and explained (§ 9 and § 14i).

The **Federal Building Code** is the main regulatory framework for urban planning and contains among other things regulations for urban land use planning. It stipulates that in the context of both a preparatory land use plan and a binding land use plan public agencies must be informed as early as possible of the aims of the planning, of variants and expected impacts. The public agencies must provide relevant information and must be asked for their statement concerning the draft plan by the community.

When the land use plan is drawn up the public authorities inform the community whether they think the implementation of the plan will have any serious and unexpected harmful impacts on the environment (§ 4).

The public must be informed as early as possible of the aims of the planning, of variants and expected impacts. The public has to be given the opportunity to make comments and criticisms. The draft plans and existing statements have to be displayed publicly, and announcements to the public display must be issued in the customary manner. The public has to be given the opportunity to make statements, which have to be considered. The result has to be communicated (§ 3).

The approval of the preparatory and binding land use plans must be granted in the customary manner. An explanation has to be added about how the results of the participation process were considered and, if applicable, why decisions were taken against the statements.

**European Water Framework Directive:** Article 14 of the European Water Framework Directive requires member states “to encourage the active involvement of interested parties” in the implementation of the directive. In Germany, this requirement is regulated by the respective state water acts.

In the context of the development of the River Basin Management Plans’ time table and action programme, the measures planned and the draft of the plan have to be published. Public comments must be allowed. The final plan must then be published again (State Water Management Act of Baden-Württemberg, § 3e). The relevant public authorities are obliged to give information and to make contributions in this process (§ 3d).

The main licensing procedure for projects in the context of sectoral planning in Germany is the **planning approval procedure** which is regulated in general by the Administrative Procedures Act (§§ 72-78). The project developer delivers his plans to the authority responsible for the hearing procedure. The public agency is asked to make a written statement. The plan is released publicly and the affected people have the opportunity to make written objections. The information must be issued to the public in the customary manner. Public hearings must be held where objections and statements from the public agency are discussed by word of mouth. For any results, statements and objections on which agreement could not be reached are forwarded to the planning approval authority which takes a legally binding decision after balancing and weighing both the interests of the developer and the statements and objections from others. The decision has to be delivered to the developer and the affected people and publicly displayed.

In some cases a planning permit can replace planning approval. This is the case when the rights of third parties are not adversely affected or if the affected parties have given their written consent to the use of their property and agreement has been reached with public agencies. In contrast to planning approval, these procedures require no participation by the general public.

## Evaluation

These statutorily required procedures all have in common that they do not go beyond the level of consultation, according to Arnstein's (1969) concept of participation. The public and government agencies are asked for statements and objections which have to be considered by the deciding authority but they have no power to contribute to the decision-making process. The consideration does not need to go beyond a mere check-up if the project is in compliance with law.

Furthermore, the official depiction and description of plans and explanations often are not in a form that is understandable for laymen.

Therefore, if revitalisation projects aim at real participation, existing statutorily required public participation is not enough. Plans and explanations must be made understandable to the public.

In addition, statutorily required models of cooperation do not foster the cooperation or teamwork between administrative departments. Public participation is guided by formal procedures that do not provide much opportunity for departments to take their own initiative.

## Non-statutory models of participation and cooperation in Germany using the example of Stuttgart

In Stuttgart there is neither a resolution at the city level mandating public participation nor an organisational unit responsible for stakeholder involvement. There is only the municipal code which regulates the cooperation between political committees at the district and city level.

Nevertheless, various models of non-statutory participation and cooperation have been established, varying between cooperation with regard to single projects, workgroups meeting more or less regularly and political committees following procedures defined by the Municipal Code.

### General cooperation between the administration and political committees

There are three main actors on the political-administrative stage:

- administration (5 departments involved in the context of revitalisation projects)
- the city council of Stuttgart
- 23 district councils

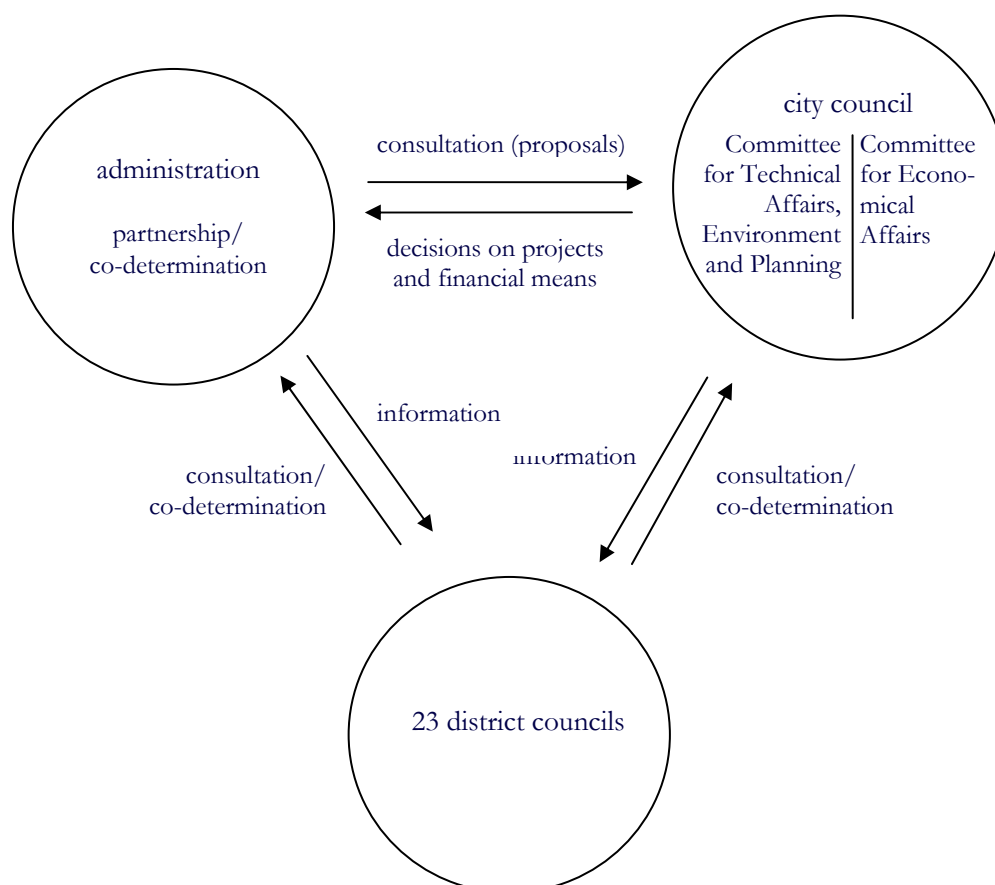


Figure 2.4-2: Scheme of cooperation within the City of Stuttgart (© City of Stuttgart).

The city council of Stuttgart charges the administration with the development of concepts for specific topics such as urban revitalisation projects. The administrative departments submit proposals to the city council (a form of consultation) which decides on the realisation of the project with regard to the general approach and financial means for planning and implementation.

The City of Stuttgart is divided into 23 districts. The district councils have to be informed and consulted on matters that are important to their district. They meet every two to four weeks. They do not have the right to make final decisions, but do have a strong position with regard to objections. Nevertheless, the ultimate deciding authority is the city council.

As the decisions of the district councils have to be considered by the city council, the level of participation ranges from consultation to co-determination.

### Cooperation between administrative departments

With regard to the planning and implementation of single projects there are five departments in Stuttgart that are most involved with revitalisation projects:

- Department for City Planning and Urban Renewal / Landscape and Green Structures Planning
- Department of Environmental Protection
- Department of Civil Engineering
- Department of Housing, Stock and Properties
- Department of Gardens and Parks

There is no institutionalised committee bringing these departments together to push revitalisation projects or to develop a common planning strategy. The departments cooperate with reference to single projects on an ad hoc basis only.

The lifecycle of a revitalisation project often follows a particular pattern as it is handled by different departments with specific responsibilities at each step of its realisation:

Table 2.4-3: Responsibilities of departments in the course of revitalisation projects (© City of Stuttgart).

Planning and implementation step	Responsible department	Departments additionally involved
Conceptual planning	City Planning and Urban Renewal	
Land acquisition	Housing, Stock and Properties	
Preliminary draft planning	City Planning and Urban Renewal	Environmental Protection (water and nature conservation aspects, contaminated sites), Civil Engineering (technical and hydraulic aspects)
Draft planning	City Planning and Urban Renewal	Environmental Protection, Civil Engineering
Planning for permission	Civil Engineering	Statements by the other departments
Planning of execution	Civil Engineering or Gardens and Parks	Statements by other departments
Implementation	Civil Engineering or Gardens and Parks	-
Maintenance	Gardens and Parks (banks and floodplain), Civil Engineering (riverbed)	-

Projects on the Neckar River require close cooperation with the federal water and shipping authority responsible for the waterway.

**Evaluation:** During the course of a project's planning and implementation, responsibility shifts between the departments, causing a lack of continuity. Sometimes this results that the goals that were pursued at the start of the project are not implemented in the intended way. Due to lack of staff and time the coordination and balancing of changes is poor.

### ***Working committee "water body renaturation"***

The working committee "water body renaturation" was brought into being by the head of the Department of Environmental Protection. Five departments dealing with renaturation measures are involved:

- Department for City Planning and Urban Renewal / Landscape and Green Structures planning,
- Department of Environmental Protection – Waters,
- Department of Environmental Protection – Nature Conservation,
- Department of Civil Engineering, and
- Department of Housing, Stock and Properties.

The working committee meets twice a year. They compile a paper stating the proceedings of various revitalisation and renaturation projects and discuss emerging problems and their solutions.

**Evaluation:** The working committee does not act operationally and has no planning function. Although all departments dealing with river revitalisation projects are members of the working committee, concepts and strategies for planning and implementation of revitalisation projects are not compiled or discussed.

As all departments dealing with river revitalisation projects are members of the working committee, the committee could have the potential to be an instrument for better cooperation by engaging in joint operational planning and through joint promotion of revitalisation projects to decision-makers.



***Working committee “nature and environment” (AGU, Arbeitsgruppe Umweltschutz)***

The working committee “nature and environment” consists of staff members from:

- the Department of City Planning and Urban Renewal / Landscape and Green Structures Planning,
- the Department of Environmental Protection – Nature Conservation,
- the Department of Civil Engineering,
- the Department of Gardens and Parks – Open Spaces,
- the Department of Gardens and Parks – Forestry commission office, and
- the Department of Housing, Stock and Properties – Agricultural issues.

The working committee meets monthly. Concrete projects in the areas of nature conservation, landscape planning, open spaces, environmental protection and maintenance of gardens, parks and open spaces are discussed, and statements about project planning procedures are coordinated to avoid inconsistencies and duplication of work.

**Evaluation:** The working committee is not focused on revitalisation projects. It covers a wide range of different areas and projects. Therefore, it is an approved platform for discussing problems and issues of specific (revitalisation) projects, but it does not act operationally and strategically and has no planning function.

***Other administrative committees***

There are some other committees which manage issues related to revitalisation projects such as the work group “playground roadmap” dealing with the supply and provision of playgrounds, the work group “social issues” and the work group “plan coordination” dealing with the coordination of construction works. They act in mutual consultation.

**Institutionalised involvement of external local stakeholders**

There are some committees that deal with landscape planning and whose cooperation between the city administration and external local stakeholders has become institutionalised.

***Working committee “Farming Concept” (Arbeitsgruppe Landwirtschaftskonzept)***

This working committee was requested by farmers’ associations and set up at the initiative of the Stuttgart city council.

It consists of staff members from:

- the Department for City Planning and Urban Renewal,
- the Department of Environmental Protection, Lower Nature Conservation Authority,
- the Department of Housing, Stock and Properties / Agriculture,
- the Department of Gardens and Parks,
- the Agriculture Administration, and
- the Stuttgart farmers’ association.

The task of the working committee is to secure and develop agronomy in Stuttgart and to develop concepts for agriculture in surrounding the urban area with special attention given to the problems of land use pressure on arable land by settlements and infrastructure. A new post was created at the Department of Housing, Stock and Properties serving as an interface between farmers and the City of Stuttgart. At first, the working committee intended to develop a concept that supports successful farming and simultaneously develops natural resources and landscape scenery, thereby coordinating and balancing

plans that affect agricultural interests. However, due to lack of staff and time constraints this goal could only be minimally achieved.

**Evaluation:** The post at the Department of Housing, Stock and Properties is very helpful as it helps city administrators keep in touch with farmers and farmers' associations. The staff is able to provide valuable and detailed information about trends, the status of properties and specific problems. This is helpful in the search for land to acquire for urban revitalisation projects on the fringe of Stuttgart.

A survey on the conditions of farmers in Stuttgart provides valuable information on the trends in agriculture. The result is also important for revitalisation projects because it made clear that there has been a shift in generations living on the farms in Stuttgart. It is clear that in the near future no farms will be given up and therefore no additional land will be available any time soon.

The level of participation is consultation/inclusion of target groups.

### ***Roundtables on “biotope network planning”***

In Stuttgart there are several roundtables on “biotope network planning”. They were initiated by the Department of Environmental Protection and function at the district level. Their members are:

- farmers,
- local politicians,
- administration representatives (Department of Environmental Protection, Department of Civil Engineering and, on a case by case basis, the Department of City Planning and Urban Renewal / Landscape and Green Structures Planning),
- NGO representatives,
- landscape planners, and
- interested citizens.

The roundtables meet at irregular intervals. They deal with the implementation of the biotope network concept for the Stuttgart districts. They discuss maintenance measures of biotopes such as low-intensity meadows, border of fields, hedges or oligotrophic grasslands and coordinate the concrete work efforts. Members of the roundtable – namely, farmers and wine growers – accomplish the measures. The roundtable also discusses the impacts of plans on the environment in the district.

**Evaluation:** The roundtables have power to make decisions about topics of biotope network planning (maintenance measures) only. As all stakeholders usually affected by renaturation measures are members of the roundtables on “biotope network planning”, and thus are used to cooperating, this is an appropriate platform to discuss revitalisation plans and to find solutions jointly.

With regard to revitalisation projects, the level of participation ranges from consultation to co-determination, depending on the scope that the executive organisation is willing to grant.

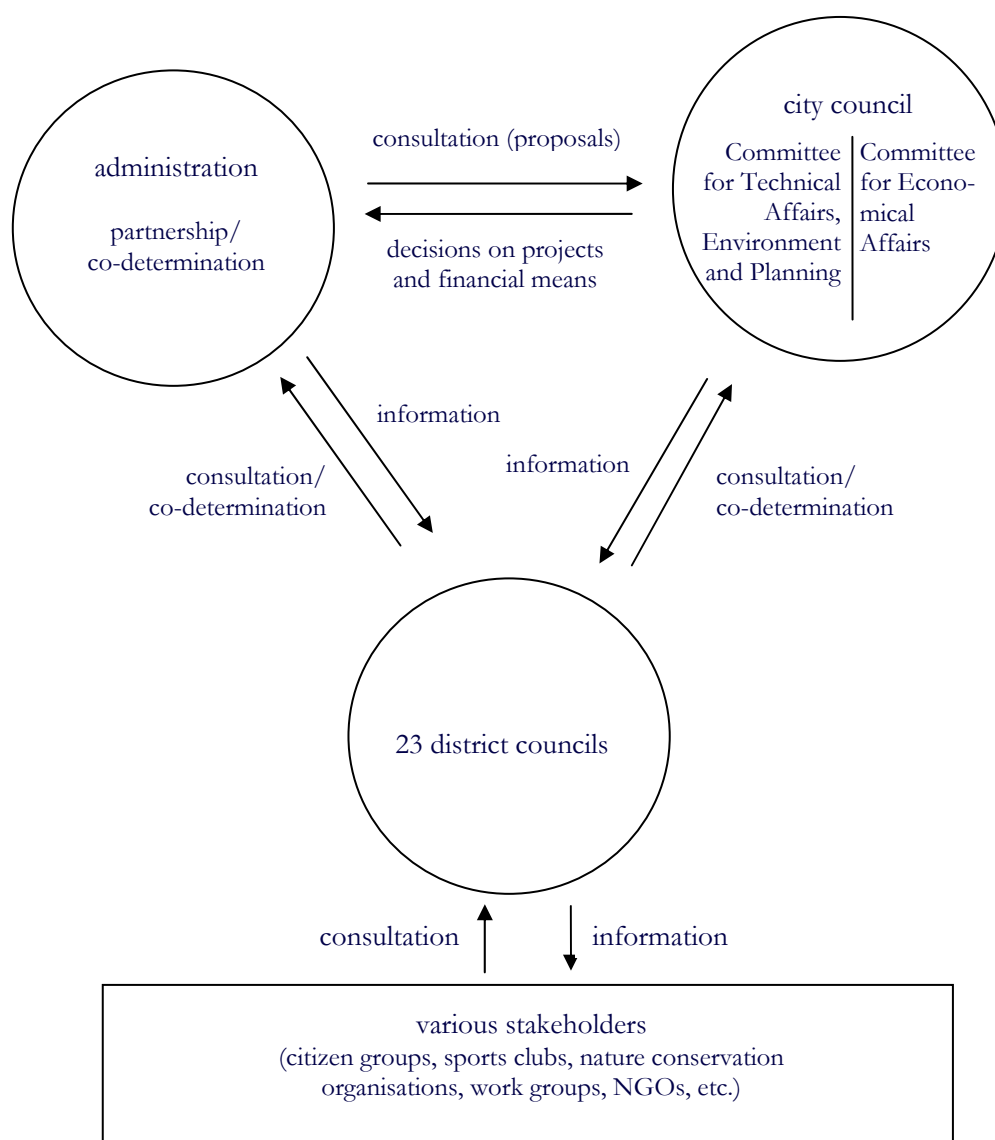


Figure 2.4-3: Scheme of cooperation including the involvement of external stakeholders in Stuttgart (© City of Stuttgart).

### Project-related involvement of local stakeholders and the public

In addition to the above-mentioned models of participation and cooperation, local stakeholders and the public are sometimes involved in the development of particular projects. Whether they do or not depends on:

- whether people are directly affected or not,
- the extent of the project, and
- the estimate by the responsible department whether public and stakeholder involvement will be helpful for the implementation of the project or not.

Sometimes informational meetings are held and press information released (participation level: information). Planning workshops or roundtables are rarely established due to lack of staff and time.

If a river revitalisation project is implemented in the context of a “redevelopment area”, or in the context of a project connected to the federal funding programme “Social City” (*Stadtteile mit besonderem Entwicklungsbedarf / soziale Stadt*), the rules require local stakeholder and public involvement through institutionalised participation processes.

---

## Conclusion and recommendations

The statutorily required procedures of participation do not go beyond the level of consultation. Therefore, if revitalisation projects aim at real public participation, existing statutorily required public participation is not enough.

It is also important to note that statutorily required models of cooperation do not foster cooperation or teamwork among administrative departments. The participation is conducted according to formal procedures and does not provide much scope for alternative initiatives.

Another drawback is that the presentation and explanation of plans often are not understandable to laymen.

In Stuttgart there is neither a policy at the city level requiring public participation nor an organisational unit responsible for stakeholder involvement. There is only the municipal code which regulates the cooperation between political committees at the district and city levels.

However, various models of non-statutory cooperation are established and range from workgroups meeting more or less regularly to political committees following procedures defined by the municipal code. However, there is no committee which can develop a common strategy and promote urban revitalisation projects. The departments cooperate on an ad hoc basis on single projects with shifting responsibilities at different stages of realisation.

Despite drawbacks, there may be the possibility to improve the practice of public participation: In order to analyse and improve the situation, the REURIS “administration” workgroup was created within the REURIS project. The city’s Department of Economic Aspects, Commerce and Trade, the Stuttgart Marketing Association and the Stuttgart Organisation for Regional Planning (VRS, *Verband Region Stuttgart*) were invited to participate in this workgroup. For the first time, the staff of these departments met regularly to discuss planning and implementation methods with regard to revitalisation projects in Stuttgart and to think about future scenarios and possibilities of improving cooperation (including a pilot action). Most of the workgroup members appreciated the initiative and expressed their hope that revitalisation projects could be fostered and better implemented by improved cooperation. They agreed that the meetings should be continued, but it is not certain if this is possible after the completion of REURIS due to small staffing levels and lack of time.

Because all departments dealing with river revitalisation projects are members of the “water body renaturation” working committee, this group has the potential to be an instrument for better cooperation by making joint operational plans and by joint promotion of revitalisation projects with decision-makers.

In Stuttgart, landscape planning projects, and in particular urban revitalisation projects, have not gone beyond the level of information and consultation/inclusion of target groups.

With regard to public participation and the involvement of external stakeholders, city officials face the problem of time constraints if they seek to do more than follow formal procedures and involve affected stakeholders. They are willing to foster public participation, but have to weigh whether or not it is worthwhile. Furthermore, landscape planning, and urban revitalisation projects in particular, are very complicated, require expert knowledge and thus may be incomprehensible to the average citizen. Therefore, it is necessary to think about how, to which extent and at which time to involve people.

Therefore, the following recommendations can be given:

- Implement a committee/workgroup specialising in urban river revitalisation.
- Appoint a coordinator for river revitalisation projects, who oversees the projects from start to finish, informs all departments involved regularly about any changes and facilitates synchronised solutions at every level of the planning.
- Foster the use of the Internet.
- Provide detailed information and the possibility to make comments.



- Create plans and texts that are understandable to laymen.
- Create an urban river revitalisation programme accepted and supported by the city council and district councils.

## Summary

The methods of cooperation and public participation used in Germany depend on the type and extent of each particular project. At a minimum, there are formal procedures that are statutorily required. Public participation and the involvement of public agencies are statutorily required in the context of formal licensing procedures such as planning approval procedures and the environmental impact assessment of specific projects, by the Federal Building Code with regard to land use planning (binding land use plans and preparatory land use plans) and in the context of water basin management plans (according to the EU Water Framework Directive).

These statutorily required procedures of participation do not go beyond the level of consultation. Therefore, if revitalisation projects aim at real public participation, existing modes of statutorily required public participation are not enough. Besides, statutorily required models of cooperation do not foster the cooperation or teamwork between administrative departments. The participation is conducted by formal procedures and does not provide much scope for alternative initiatives.

The presentation and explanation of plans are often not understandable to laymen.

However, there are various institutionalised models of non-statutory cooperation differing throughout Germany. In Stuttgart, they vary between cooperation with regard to single projects, workgroups meeting more or less regularly and political committees following procedures defined by the Municipal Code. However, there is no institutionalised committee with a mandate to develop a common planning strategy and push urban revitalisation projects. The city's administrative departments cooperate only on individual projects and with shifting responsibilities between departments.

In Stuttgart, according to Arnstein's (1969) concept of public participation, landscape planning projects, and in particular urban revitalisation projects, have not gone beyond the level of information and consultation/inclusion of target groups.

With regard to public participation and the involvement of external stakeholders, besides formal procedures or the involvement of affected stakeholders, landscape planners face constraints of staffing and time. They are willing to foster public participation, but have to weigh whether or not it is worthwhile. Furthermore, landscape planning and in particular urban revitalisation projects are very complicated, depend on expert knowledge and thus may be too technical for the average citizen to understand. Therefore, it is necessary to think about how and at which time to involve the public.

Some recommendations are given to improve the situation.

### 2.4.2.4 Review on the models of public participation on Poland, the Czech Republic and Germany

The experiences with public participation in urban river revitalisation are quite similar in Katowice, Brno and Stuttgart.

On the one hand, there are some types of projects that require public participation by law. These statutorily required procedures in all three countries have in common that they do not go beyond the level of consultation/inclusion of target groups. The participation is conducted according to formal procedures, which are limited by time and the manner of involving partners. Furthermore, they do not provide much scope for alternative initiatives or personal contacts and tend to discourage rather than encourage people; those who may be affected by the project try to protect themselves instead of bringing forward their ideas.

Therefore, if revitalisation projects aim at real participation, statutorily required public participation is not enough. All partners see the need to go beyond the level of consultation and to really involve stakeholders by timely application of preventative, voluntary planning processes that focus on cooperation and co-determination.

For the city authorities in all three countries – when organising revitalisation projects – there is a willingness to foster public participation, but due to lack of staff and time often only the legislative minimum is fulfilled. The executing office has to weigh whether or not public participation is worthwhile, given these resource constraints. Nevertheless, each of the partners' cities has experience with public participation that goes beyond the non-statutory level that has been implemented at the discretion of the executing office. These experiences show that once the public is involved, the projects are well accepted and mostly get people's support.

By contrast, private investors are usually not used to, or are not interested in, sharing their ideas and plans or participating in a creative planning process with other stakeholders.

There is a wide range of methods of public participation which are typically classified by the degree to which participants can influence the final decision (i.e., level of participation). As each project is different and has its own challenges and characteristics, there is no one single method or procedure. Each project needs a customised communication and participation strategy and an individual approach. The most frequently used methods and techniques in the partners' cities are, at the information level, public presentations, print materials and public display, articles in official gazettes, Internet, press releases and press conferences and, at the consultation level, roundtables, town hall meetings with panel discussions and various types of working groups. In these efforts beyond non-statutory requirements, the levels of co-determination, delegated power or citizen control are less frequently achieved.

Table 2.4-1 shows the strengths and weaknesses which are seen in all three countries.

*Table 2.4-4: Strengths and weaknesses of public participation in Poland, the Czech Republic and Germany (© REURIS project team).*

Strengths	Weaknesses
<ul style="list-style-type: none"> <li>• Increasing awareness of the importance of public participation</li> <li>• Growing standard of graphics and texts for materials</li> <li>• Increasingly interactive character of website applications and use of modern communication tools</li> </ul>	<ul style="list-style-type: none"> <li>• The formalised character of plans and texts often are not understandable for laymen.</li> <li>• There is a lack of formalised procedures for public participation and no systematic and comprehensive communication system. It is at the discretion of the public authority how and to what extent stakeholders are involved.</li> <li>• Long planning periods cause declining interest in the topic.</li> <li>• Lack of staff, money and time</li> <li>• Information is often provided to the public only at the end of the planning process and only affected people are involved.</li> </ul>

In Katowice, electronic exchange is not common. There is also a lack of formalised procedures in the relations between the city council and bureaucratic administration. In Stuttgart, none of the institutionalised work groups and round tables focuses on a strategy to foster river revitalisation projects. Furthermore, the responsibility for different elements of the project shifts between departments during the course of a project's planning and implementation. This fact results in a lack of continuity, sometimes causing the goals that were pursued at the start of the project to not be implemented in the intended way. Due to lack of staff and time, the coordination and balancing of changes is poor.

In Katowice and in Stuttgart there is no organisational unit responsible for public participation, and this shows that political awareness of and commitment to this issue is poor. In Stuttgart there is not even a resolution promoting participation at the city level; instead, there is only the municipal code which regulates cooperation between political committees at the district and city levels. However, in the context of the railway station project Stuttgart 21, the need for stakeholder involvement has become more visible and thus awareness has risen.

## 2.5 Experiences in the context of REURIS

Public participation was not only theoretically a focal point of the REURIS project. As public participation was supposed to be essential for the success of revitalisation efforts, each partner developed a customised communication and participation strategy defining goals, target groups and methods of public participation in their region and implemented and tested the strategy. Addressing and involving target groups not only gave stakeholders the chance to play an appropriate role in the revitalisation process, but also had educational effects for the project partners. Furthermore, the partners held meetings with experts and professionals in order to exchange their experiences with planning and implementation methods and public participation.

In implementing their public participation strategies, the partners shared common goals such as:

- raising awareness about urban river revitalisation and its ecological, economic and social benefits,
- satisfying the demands of an integrative approach to river revitalisation projects by considering social, economic and ecological aspects simultaneously,
- disseminating information about the best practices for implementation, managing and financing of revitalisation projects in areas with high-density populations and industrialised activities, and
- testing of public participation methods and learning from experiences.

However, beyond these common goals each partner focused on additional project or region-specific goals:

- In **Katowice**, the focus lay on:
  - Planning for detailed river valley management using the example of the Ślepiotka Valley,
  - Providing information and promoting public participation in the context of the pilot action future visions of the river corridor, as well as future scenarios, and
  - General improvement of cooperation between parties involved in urban river revitalisation in Katowice: “Partnership for Ślepiotka”.
- In **Bydgoszcz**, the focus lay on:
  - Providing information and promoting public participation in the context of the pilot action and future scenarios,
  - Devising detailed planning for development of the Old Bydgoszcz Canal and the neighbouring park area management, and
  - Developing general rules for revitalisation of urban river spaces.
- In **Brno**, the focus lay on:
  - Providing information and promoting public participation in the context of the pilot action, and
  - Promoting intensive communication between the implementation team and property owners in the project area.
- In **Pilsen**, the focus lay on:
  - Involvement of stakeholders in the context of the development of all of Pilsen’s rivers and the specific project on Božkov Island, and
  - Improvement of planning and implementation methods.
- In **Stuttgart**, the focus lay on:
  - Providing information and promoting public participation in the context of the pilot action and future scenarios, and
  - General improvement in planning and implementation, of cooperation among parties involved in urban river revitalisation and fostering urban river revitalisation.

- In **Leipzig**, the focus lay on:
  - Providing information and promoting public participation in the context of the pilot action and future scenarios, involvement of local players to raise awareness of the project and improvement and promotion of collaboration among those participating in the urban revitalisation of the river within the framework of the Thostgrundbach pilot action,
  - Involvement of local stakeholders in order to raise public awareness about the importance of revitalised urban rivers in general, and
  - Raising awareness about the economic aspects of urban river revitalisation.

The goals, strategies, methods, implementation and findings for each city are described in the following sections, where recommendations are also given.



## 2.5.1 Experiences in Katowice

The focus of public participation and communication activities in Katowice lay on:

- Planning of detailed river valley management (developing a planning system for detailed river valley management) using the example of the Ślepiotka valley,
- Providing information and promoting public participation in the context of the pilot action and future visions of the river corridor, as well as future scenarios, and
- General improvement in cooperation between parties involved in urban river revitalisation in Katowice using the example of “Partnership for Ślepiotka”.

All of the above-mentioned aims are closely connected and require joint solutions.

### 2.5.1.1 Planning for detailed river valley management using the example of the Ślepiotka valley

#### Short description of the project

The REURIS pilot action in Katowice comprises the partial restoration of an ecological corridor along the Ślepiotka River, including revitalisation of the river channel, an increase in water retention, improvement of storm water management, restoration of landscape resources and improvement of public access to the Ślepiotka River valley.

The main goal has been creation of a green recreational area which will improve the environmental value of the site and increase residents' quality of life. Reestablishment of water use values from an ecological and economic point of view is also important, with the elimination of negative occurrences which should be achieved by banning hazardous land use practices.

#### Participation and communication strategy

Planning for detailed river valley management has been a multistage process that has required the following sequence of actions with the involvement of stakeholders and experts:

- Stage I: Making a **diagnosis**: Indicating key conditions, both inside and outside the valley, identifying the distinctive potentials of the river valley that determine possibilities and directions of revitalisation. Methods used: Expert study and workshops with representatives of the community concerned with the valley's revitalisation.
- Stage II: Co-ordination of **scenarios**: Working out scenarios for taking action and devising a wishful scenario (**vision**) for the river valley. This involved comparing written forms of both scenarios in order to identify the most significant discrepancies between them. Methods used: Workshops with representatives of the community concerned with the valley's revitalisation.
- Stage III: Formulating strategic **objectives** for the valley's revitalisation: Concentrating on the areas of strategic gaps, i.e. the greatest discrepancies between the scenarios for action and the vision. Method used: Mostly expert work.
- Stage IV: Generating revitalisation **projects**: After verification of revitalisation objectives it is necessary to work out a list of projects that will contribute to realisation of each particular objective. (In the case of the structure of objectives, the lists of projects should be formulated in reference to objectives that occupy the lowest position in the “hierarchy”.) Subsequently, for each of the projects a project chart should be worked out, consisting of more detailed information concerning the project. The chart will be particularly useful during the next stage “prioritisation”. Method used: Working out the list by an independent team of experts and supplementing it with input from representatives of the community concerned with the river valley revitalisation (via workshops).

- Stage V: **Prioritisation** of revitalisation projects: Selecting projects that should begin the revitalisation process, using specific tools (specified General Electric matrix) of prioritisation. Methods used: Meetings and workshops with experts.
- Stage VI: Determining an **implementation and monitoring system** for the long-term plan of the valley's revitalisation. This is, in a sense, a transition phase between the planning and realisation stages.

## Results and experiences

Essential for revitalisation planning of the river valley is consistent execution of the process in a participatory manner, seeking partners from the directly concerned municipality and institutions managing the valley or the infrastructure in the valley and its surroundings, as well as business entities, non-governmental organisations functioning in the surroundings of the valley, other social or business partners, educational or scientific research entities, the local community and private land owners.

The above-mentioned allows for:

- a high level of social consultation,
- combining good knowledge about the river valley (various sources of information) with the opportunity to get to know and take into consideration different outlooks on the management of the area,
- engaging a broad representation of the community concerned with the valley's revitalisation (the sense of being co-author of the revitalisation plan, and consequently a sense of ownership of the resulting propositions and solutions) that, at the implementation stage, should bear fruits of motivation and shared responsibility for the realisation of the long-term vision of the revitalisation of the valley, and
- the chance to create an inter-sectoral partnership implementing the vision of the river valley revitalisation, which should produce results expressed in the number, value and speed of realised revitalisation projects, as well as creating transparency in the monitoring system, organised to meet the needs of the revitalisation process.

Moreover, in order to support the work of planning, as well as cooperation between interested entities, various auxiliary forms were created within the framework of the REURIS project:

- **project chart**: allows for the collection and organisation of detailed information on each of the projects, necessary for prioritising projects,
- **Ślepiotka 2025 matrix**: a project prioritising tool, patterned on the GE matrix, adjusted to the specific needs and conditions of the Ślepiotka valley, and
- **Delphi questionnaire**: addressed to experts/specialists, serves the purpose of devising criteria for evaluation of the Ślepiotka valley revitalisation process, as well as identifying "critical factors" for maintaining the results of the REURIS pilot investment.

### 2.5.1.2 Providing information and promoting public participation in the context of the pilot action and future visions of the river corridor, as well as future scenarios

#### Participation and communication strategy

The area which has been chosen for pilot action was already the property of the City of Katowice, so there was no legal requirement to involve any other land owners. Nevertheless, all local stakeholders were involved, especially neighbours of the pilot action area.

There was no possibility for substantial modifications to the technical documentation of the pilot investment, so the focus of public participation was on dissemination of the project objectives and

informing the public about the progress as the investment took place, as well as about the intended continuation of revitalisation, namely the planned blue-green river corridor.

The public participation strategy was composed of:

- informational meetings with members of the Auxiliary Councils of Ochojec and Ligota districts, with affected people and with locally engaged groups,
- workshops with the above-mentioned people,
- informational meetings in local schools,
- exhibits in local schools that were open for students and interested stakeholders,
- visits to the project site and guided walks for members of the Auxiliary Councils of Ochojec and Ligota districts, as well as other interested people,
- public relations (press releases, internet website ...), and
- meetings and workshops with local governmental administrative departments.

## Results and experiences

**Informational meetings:** There were many meetings during 2009 and 2010. These meetings were an opportunity to introduce the REURIS project to interested people and for them to get to know the project team. During these meetings, it was also possible to encourage discussion and for various stakeholders to express their personal points of view. As a result of this process, the building of local support groups around the idea of Ślepiotka valley development began.

**Exhibits** at nearby schools in first months of 2010 were also aimed at disseminating information to the public. The exhibits mainly dealt with the pilot action.

**Visits to the project site and guided walks** were aimed at making visible “what is going on in our neighbourhood”. Moreover, as a personal approach, since the tours were usually rather small groups, it was possible to address people at a personal level and help them feel responsible for this area.

The greatest tools for distributing information were the project’s **website** (<http://reuris-f.gig.eu/pilot/>) with a photo gallery and the **message board** (forum) about Ślepiotka River revitalisation (<http://www.reuris.fora.pl/>), where all interested people could ask questions and share their knowledge and opinions about revitalisation in general, the Ślepiotka river valley in particular, as well as comments about previous meetings and workshops.

The most important parts of the public participation strategy were the **workshops**, which were divided into two cycles:

- workshops on planning methods and consensus procedure, and  
*These meetings were aimed at raising awareness of the benefits of river revitalisation, at exploring the possibilities and limits with regard to the vision of the Ślepiotka corridor revitalisation plans and at finding solutions through consensus.*
- workshops on the development of urban river spaces management (envisioning scenarios, as well as practising consensus procedures).

### Workshops on planning methods and consensus procedure

In August and September 2010, within the REURIS project, two consensus workshops in Katowice were organised for representatives of local communities from districts located in the Ślepiotka valley. The main goals were as follows:

- determining a general, long-term vision for the Ślepiotka valley which will become a reference point for the work of the Partnership for Ślepiotka organisation, and
- testing the consensus tool (the General Electric matrix) used for prioritising projects.

During the consensus workshops a method of evaluating and prioritising the project was presented and “practised” on example designs for Ślepiotka valley revitalisation: a General Electric matrix.

In order to increase the usefulness of the GE matrix for the Partnership for Ślepiotka, after these meetings and before the scenarios meetings, the following was done:

- Evaluation of the criteria with the possibility for correction or replacement in such a way that new criteria are created that are more specific (environmentally, socially, spatially and economically) and adapted to the conditions and needs of the Ślepiotka valley revitalisation project.
- Preparation of definitions and details within each criterion according to the level of their implementation, and assignment of them with proper mark in order to achieve even bigger convergence of particular projects’ evaluation.

The meetings resulted in the creation of a coherent vision for spatial management of the Ślepiotka valley and for obtaining/increasing the ability of administrators to achieve agreement by combining partners’ interests and ensuring convergence of their goals.



Figure 2.5-1: Consensus meeting for institution, August 2010  
(© CMI Katowice).



Figure 2.5-2: Consensus workshop with stakeholders, September 2010 (© CMI Katowice).

## Workshops on the development of urban river spaces management

In February 2011 the cycle of scenario workshops was held.

The “starting points” for scenario meetings were:

- results from the consensus workshops,
- the list of revitalisation projects to realise the vision of the valley’s spatial management,
- project charts created for all revitalisation projects, and
- the projects prioritisation tool: the Ślepiotka 2025 matrix.

In this context the order of scenario workshops was not accidental and included four successive meetings with:

- **professionals:** one workshop,
- **the local community:** two workshops with identical themes and information, and
- **representatives of institutional entities:** one workshop (mostly aimed at fostering cooperation).





Figure 2.5-3: Scenario meeting, February 2011 (© CMI Katowice).



Figure 2.5-4: Scenario workshop with stakeholders, February 2011 (© CMI Katowice).

Table 2.5-1: Public participation aspects of the series of scenario workshops organised in Katowice (source: Brożkowska 2010, 2011)

Scenario workshop	Workshop objectives	Applied work methods	Results achieved
With professionals	<ul style="list-style-type: none"> <li>• Completion of project charts</li> <li>• Prioritisation of Ślepiotka spatial management on the feasibility axis</li> <li>• Indicating phenomena, trends and tendencies that might influence Ślepiotka valley development before 2025</li> </ul>	<ul style="list-style-type: none"> <li>• Presentation</li> <li>• Group work</li> <li>• Discussion</li> <li>• Visual moderation</li> </ul>	<ul style="list-style-type: none"> <li>• Workshop participants gained detailed knowledge of planned revitalisation projects and the way they will contribute to realisation of the long-term vision for the valley's revitalisation.</li> <li>• Workshop participants proposed an order of priority for the realisation of projects: assessing them according to the feasibility criterion in the <i>Ślepiotka 2025</i> matrix (in two independent groups differentiated with respect to represented competences and institutions).</li> <li>• Workshop participants exchanged opinions about the proposed revitalisation projects, which enabled completion and supplementation of project charts.</li> <li>• Workshop participants negotiated the framework for the monitoring system of the Ślepiotka valley revitalisation process.</li> </ul>
With the local community	<ul style="list-style-type: none"> <li>• Working out methods for maintaining the results of the valley revitalisation by the local community</li> <li>• Prioritisation of spatial management projects on the demand axis</li> </ul>	<ul style="list-style-type: none"> <li>• Presentation</li> <li>• Group work</li> <li>• Discussion</li> <li>• Visual moderation</li> </ul>	<ul style="list-style-type: none"> <li>• Workshop participants gained detailed knowledge of planned revitalisation projects and the way they will contribute to realisation of the long-term vision of the valley's revitalisation.</li> <li>• Workshop participants proposed an order of priority for the realisation of projects: assessing them according to the feasibility criterion in the <i>Ślepiotka 2025</i> matrix.</li> <li>• Workshop participants exchanged opinions about the conditions for and possibilities of local community participation in maintaining the results of the valley revitalisation.</li> </ul>

The meetings resulted in making possible the participation of representatives from all entities that should or might be interested in realisation of the long-term vision of Ślepiotka valley spatial management. It also became possible to compare the opinions of specialists with those of users, helping to foster consensus between what is permitted and possible and what is expected and desired in Ślepiotka valley.

Generally it was easier to work with professionals, especially when they had been well prepared for the workshop, but stakeholders were definitely more interested in the topic.

However, local stakeholders were more oriented toward discussion about general problems with the Ślepiotka River and river valley than on accomplishing specific tasks. It took more time to convince them to think about specific work activities for the Ślepiotka 2025 matrix and project charts.

The hardest were the first meetings because of the REURIS team's lack of experience and the participants' lack of knowledge about the project and revitalisation in general. Later on, the REURIS team had an understanding of what could possibly go wrong during discussion and how to prepare themselves and participants before each workshop (for example, by sending participants materials in advance).

### **2.5.1.3 General improvement between the parties involved in urban river revitalisation in Katowice using the example “Partnership for Ślepiotka”**

#### **Strategy for general improvement of cooperation**

In order to raise awareness of the benefits of urban river revitalisation and develop better cooperation between the entities involved, the following strategy was followed:

- presentations to political committees,
- public presentations and public planning meetings,
- workshops for City of Katowice departments and other institutions, and
- establishment of an organisation called “Partnership for Ślepiotka”.

#### **Experiences and results**

##### **Presentations to political committees**

The REURIS project was used as an opportunity to present the issue of urban river revitalisation to the city's political committees. The main achievement was convincing the politicians that only cooperation can produce results in the revitalisation of rivers and urban space.

##### **Workshops for City of Katowice departments and other institutions**

In Katowice many departments with various sub-departments and other institutions are involved in revitalisation projects. In order to improve cooperation between them with regard to the revitalisation of river valleys in Katowice (for example the Ślepiotka River), many meetings were held. At first the main problem was that members of some sub-departments and institutions even did not know each other. So, the topics of these meetings at first mostly had to do with the overall aims of revitalisation, personal interactions, as well as information about REURIS implementation in Katowice. Later meetings focused mostly on the theoretical possibilities of improving cooperation within the revitalisation area and development of a model of a functioning partnership.

The aim by the conclusion of these meetings was the departments should be able to better cooperate and follow a joint strategy. A “partnership” should be established to promote revitalisation by supporting public relations and public participation.

### Establishment of the “Partnership for Ślepiotka”

For the implementation of these proposals, in August 2010 a consensus workshop for institutions was organised. The main goals were as follows:

- creating a consensus regarding methods of participation for the spatial planning of the Ślepiotka valley and operation of the Partnership that will implement the plan, and
- testing the consensus tool (GE matrix) used for prioritising projects.

Results:

- recognising the partnership potential of institutional, social and scientific entities which should be participants in the Partnership for Ślepiotka,
- creating cooperation models for the Partnership for Ślepiotka, and
- developing and increasing the ability to achieve agreement among the partners by combining partners' interests and ensuring convergence of their goals.

Three groups of entities were identified as key partners in the planned system of cooperation for revitalisation of the Ślepiotka valley:

- institutional partners including the institutional managers of the Ślepiotka valley, cleaning and safety services, educational institutions and, as a Partnership coordinator, Katowice City Hall,
- social partners (not institutions), including private land owners from the Ślepiotka valley, non-governmental organisations operating in the districts around Ślepiotka, architects, artists, historians, business entities, media and the local Ślepiotka valley community, and
- scientific partners (universities and scientific-research entities).

The Partnership for Ślepiotka should cooperate closely with entities functioning in the immediate surroundings of the valley both at the stage of planning the spatial management of the valley and during implementation of the plan. The proposed operating model for the Partnership for Ślepiotka is to create an association consisting of representatives of all the entities and members of the community interested in revitalisation of the Ślepiotka valley.

Fundamental lessons (experiences) drawn from this meeting were the interrelationships between the below-mentioned basic conditions and factors for the successful implementation of river valley revitalisation (for example of the Ślepiotka River):

- **partnership:** implementation of the vision of valley management means the inter-sectional Partnership for Ślepiotka should cooperate closely with entities functioning in the area surrounding the valley; the form of organisation/institution proposed for the Partnership is an association,
- **powerful leadership:** the natural leader of the Partnership for Ślepiotka is Katowice City Hall; it should assemble a task team for managing the Partnership which will combine the resources and competences of the city departments whose operating goals embrace (or should embrace) the revitalisation of urban river spaces,
- **potentials:** successful operation of the Partnership for Ślepiotka depends on each partner living up to their potential and contributing to the best of their ability to implement projects for revitalisation of the valley, and at the same time the revitalisation of the Ślepiotka valley should make the most of the valley's own potential – natural, cultural and historical,
- **proper flow of information:** the foundation for the Partnership for Ślepiotka's smooth operation is the efficient flow of information required by the entities constituting the structure of the Partnership; it is also necessary to identify and fill information gaps and effectively manage information within the Partnership,
- **participation:** creating a rank-and-file vision of the valley's revitalisation which will include creative contribution from the representatives of local communities,

- **agreement in planning:** the measure of the effectiveness of management of the Partnership will be the methods and timeframe for reaching consensus at particular stages – namely, building the vision for the valley’s revitalisation and implementation of the management plan for the Ślepiotka valley,
- **positions:** influencing the attitudes of the users of the valley in such a way that will ensure the preservation of the positive effects of the valley revitalisation, and
- **promotion:** promoting the idea of valley revitalisation and its benefits.

In March 2011, during the “scenario workshop cycle”, the workshop on establishment of the “Partnership for Ślepiotka” was held. The starting point for this meeting was the results of the consensus workshops, including:

- the proposed structure of Partnership for Ślepiotka (PfŚ),
- the roles of particular entities which together form the Partnership, and
- the possible models of organising the revitalisation team in the Katowice City Hall and a model according to which the leader of the Partnership might communicate with the local community of the Ślepiotka valley.

Workshop objectives were as follows:

- to select a co-operation model, and
- to precisely define the methods for running the Partnership for Ślepiotka.

During this workshop the following methods were used: presentations, group work, discussion and visual moderation. The results achieved included:

- participants of the workshop will present to the leader the model for organising a task team for revitalisation in Katowice City Hall, as desired by the community,
- participants of the workshop exchanged opinions and negotiated conclusions about the communication channels that should be used by the Partnership,
- each institutional entity represented at the workshop defined its demand for information as it engages in the planned revitalisation of Ślepiotka in a way that is desired by the community. The entities also presented in which ways it is possible for them to support PfŚ and realisation of the vision (by indicating resources, financial, material, non-material, etc., that they can bring to the process revitalisation), and
- participants in the workshop exchanged opinions and reached consensus concerning the possibilities for raising financial support for the Ślepiotka valley revitalisation.

Next steps:

- publicising the results of the prioritisation of revitalisation projects: indicating projects which PfŚ should begin to realise in accord with the vision of the valley’s spatial management,
- completing the communication system within the Partnership, and
- completing a system for monitoring the revitalisation process and efficiency of PfŚ.

In Katowice, REURIS provided one of the first possibilities for simultaneous co-operation among representatives with such diverse backgrounds, through the exchange of experiences and developing a common position. This approach worked quite well, because the REURIS team was able to interest many important people (professionals) in urban river revitalisation. One of biggest problems at first was that representatives from different entities tried to achieve only their own goals. It was difficult and took time to convince them to work together to achieve a common good. The other difficulty was when an invited person could not participate in a meeting or workshop and sent a substitute instead, someone who knew nothing about the project and could not make any decisions. Yet often these “substitutes” had a different point of view on the problems being discussed and this was an added value. Many difficulties have been overcome during the series of meetings and workshops, because over time the REURIS team got better and better at preparing for workshops and participants grew in awareness of the need for cooperation.



### 2.5.1.4 Conclusions and recommendations

All of Katowice's goals were closely related and required joint, intersecting solutions. In this situation, all meetings and workshops with people were aimed at achieving all these diverse goals. This combined approach worked quite well and made it possible to achieve the main goal, which was:

- involving the local community and institutions in the revitalisation of river valleys and a shared search for solutions, and
- developing a consensus that urban spaces and river valleys are a common asset of city residents and the city council and that everybody is responsible for them.

When summarising the cycle of consensus workshops organised within the REURIS project it should be emphasised that their essential feature was a concentration on two layers of the revitalisation plan:

- **implementation:** creating a coherent, long-term vision of spatial management for the Ślepiotka valley,
- **organisation-management:** this part relates to the management of the valley's revitalisation amending co-operation for Ślepiotka valley revitalisation,
- recognising the partnership potential of institutional, social and scientific entities which should be participants in the Partnership for Ślepiotka,
- creating cooperation models of the Partnership for Ślepiotka, and
- obtaining and increasing the ability to achieve agreement, for instance by combining partners' interests and ensuring convergence of their goals.

When summarising the cycle of scenario workshops organised within the REURIS project it should be emphasised that their essential feature was concentration on two layers of the revitalisation plan:

- **implementation:** this part related to the projects: their verification by representatives of the community concerned with Ślepiotka valley revitalisation, the completion of project charts containing detailed information about the projects and prioritisation of the projects,
- **organisation-management:** this part related to the management of the valley revitalisation plan and organisation of co-operation in the Partnership for Ślepiotka,
- **implementation of the revitalisation plan:** indicating external conditions that can have a (positive or negative) influence on the plan's realisation and that should be monitored, recognising the conditions under which the local community will take part in the realisation of the revitalisation plan and determining the role of the community in helping to maintain the results of the revitalisation and indicating monitoring indexes for the plan (experts' opinions on the subject are collected in the form of Delphi questionnaires), and
- **organising co-operation in the Partnership for Ślepiotka:** selecting a model of operation that is desired by the community, creating a framework for a communication system within the Partnership and listing possible methods of raising resources for the realisation of revitalisation projects in the valley.

Effectiveness in developing a vision and scenarios for the Ślepiotka valley development was achieved by grading the difficulty and detail of the issues discussed during meetings. An added value was the smooth transition from the meetings to targets.

Main recommendations:

- Try to combine two or more issues in one meeting, especially when they are linked.
- Learn about various methods and apply the methods that are appropriate to the respective objective.
- Inform and encourage the widest possible number of people who are potentially interested to participate in the planned workshops.
- Allow participants to prepare for the workshops in advance in order to get useful input from them.
- Invite experts in the field (who also have experience as moderators) to participate as moderators of meetings.
- Try to make the meeting as interesting and non-tiring for participants as possible.

## 2.5.2 Experiences in Bydgoszcz

The focus of public participation and communication activities in Bydgoszcz was on:

- providing information and promoting public participation in the context of the pilot action and future scenarios,
- devising detailed planning for development of the Old Bydgoszcz Canal and the neighbouring park area management, and
- developing general rules for revitalisation of urban river spaces.

All above-mentioned aims are closely connected and require joint solutions.

### 2.5.2.1 Public participation and communication activities

#### Short description of the pilot action

The site for investment covers a small fragment of the Old Canal and its close vicinity. In its heyday the park along the Old Canal was a favourite place for leisure activities of Bydgoszcz citizens. After the filling in of part of the channel and hence losing its significance as an inland waterway, the park gradually deteriorated. In the park areas located further away from the city centre, nature took its course and stimulated the growth and breeding of new precious plant communities that have shaped the park into an asylum of nature within a tight city tissue.

The pilot action in Bydgoszcz embraces the drawing up of a programme and spatial concept design for the whole area of the park (65 ha) that shall pinpoint the directions of the park revitalisation process. The action also involves making a technical design for the investment pilot site of approximately 3 ha.

The task of the pilot investment is the creation of a new aesthetic space in the city that will serve as a leisure spot for citizens and that simultaneously will restore the former significance of the park along the Old Canal. The Old Canal is a precious expression of the original constructors' imaginations, and thus the whole process of returning value to the park along the Canal is of fundamental value to the community, provided the historic significance is preserved and elements of the historic spatial composition are highlighted. Other than the old growth forest that accompanies the park alleys, the area does not possess significant worth as far as the nature factor is concerned. Thus, new plantings of shrubs, trees and huge flowerbeds are crucial to introduce elements of biodiversity to the area. The plan for development of the park foresees the introduction of new elements that would allow for leisure activities such as terrain stairs, pathways, handicap ramps, footbridges, leisure stair seats and small squares for chess players. Moreover, indispensable park infrastructure elements are planned such as: lighting, benches, waste bins, bike racks and a small playground, to name a few.

#### Participation and communication strategy

The pilot area is the property of the City. Thus, according to established administrative procedures there was no need to include external stakeholders in the process. However, their participation was considered to be of paramount importance. The group of stakeholders was defined strictly for the project: a spectrum ranging from future park users and institutions linked with the park and Old Canal topics. Starting with preparation of the guidelines for the design and finishing with the estimation of the final design solutions, the beneficiaries were included in the process of planning from the very beginning.

The idea was to make the citizens realise how important this territory is and to use this as a starting point for carrying out the information campaign concerning the pilot action and presenting the benefits of the revitalisation per se. That action shall lead to an increase in the park's value and its safety. The specific

character of the pilot investment and its location along the anthropogenic Old Canal necessitated a different approach to revitalisation than that used in cases connected with natural rivers. Detailed analyses of the need for and goals of revitalisation in the park along the Old Canal with respect to history, hydrotechnical conditions and nature restoration/preservation were prepared.

The second stage of engaging the stakeholders in the revitalisation process was their active participation in drawing up the guidelines for the design through recognition of the needs of future park users and the institutions responsible for the area.

The process of designing together with approving the final solutions was carried out with the participation of beneficiaries and responsible institutions.

Methods applied:

- surveys carried out in the city area and directly in the group of park users on the site of the existing pilot action,
- workshop meetings with focus groups (residents, youth, district councils and institutions connected with the park and the Old Canal),
- open discussions about the guidelines for the design among professionals in institutions responsible for the action,
- a Technical Working Group was created especially for the REURIS project as a tool that helps in the process of project investment implementation in the form of technical meetings which include the participation of beneficiaries and institutions in the design process,
- support Group project meetings,
- workshops for students at the pilot action site,
- events and public relations activities (press releases, Internet website, radio and TV), and
- meetings with departments of public administration, the planning office and representatives of institutions responsible for the park.

## Experiences and results

In the course of the project, social research was carried out and many meetings were held with a view to enabling work with stakeholders and their effective participation in the process of revitalisation.

### Surveys and focus group workshops

In the initial phase of the REURIS project in Bydgoszcz, the beneficiary groups were identified and surveys were conducted. This helped the REURIS team understand the stakeholders' expectations in terms of changes associated with the process of revitalisation. The next stage was conducting workshops for several groups of representatives: citizens, institutions, business owners and district councils. The participants at the meetings were passed the results of detailed studies of the investment land and preliminary land design assumption data. While working on a map of the area, the participants jointly carried out area SWOT analysis, and afterward they had the opportunity to clarify their expectations for the new land development plan. The meetings had the positive effect that the participants were convinced that their voices were important and eagerly participated in the meetings. The conclusions drawn from those meetings were used as to assist in determining the guidelines for the design.

### Student workshops

In July 2009, a 14-day workshop for students was organised to discuss the scope of the investment area and land adjacent to the pilot site. During the workshop a SWOT analysis led to the development of the park spatial arrangement, division of the investment area into functional zones and new development concepts. At the end of the workshops, a presentation about the REURIS project and the students' work

from the workshops was organised for the city authorities, institutions and professionals. The fresh perspective coming from young people, students of architecture from the Dutch-Polish scientific association called “Urbanisation”, allowed for a new look at the pilot site and also provided new guidance for the coming design.

### **Technical Group meetings**

During the design stage, the REURIS team organised three open, moderated meetings to allow the submission and approval of the design solutions proposed by the designer who was selected to carry out the technical documentation. The idea was to develop the final version of the joint design. The participants were representatives from city departments, the conservation officer, the institutions responsible for the park on the Old Canal, NGOs associated with the park, a nearby sports club, experts and consultants for the REURIS project. After the meetings, the REURIS team collected additional notes and comments which were sent to the designer.

Participants had not yet encountered such an approach to the design process, so initially the meetings were chaotic. At subsequent meetings after the participants had become more deeply acquainted with the subject, the work proceeded in a good atmosphere and the effect was satisfactory. The resulting concept and technical design were created based on the cooperation and ideas of many individuals, thus it met diverse expectations. An additional advantage of the meetings was the raising of awareness of the participants as to the fundamental aspects of the proper process of revitalisation, which should take the form of a broad discussion of the matter. Such an interdisciplinary approach will help to quickly solve problems arising in the following stages.

In addition to the Technical Group meetings, a series of meetings in smaller groups defined as Support Group meetings were held to tackle more specific issues related to the design process. The purpose of the meetings was to solve current problems in order to avoid them later during the administrative procedures. This helped the team prevent prolonging the project’s decision-making timeframe which might have been caused by problems within administrative bodies.

### **Public relations**

During the project activities, the REURIS team provided information about the project and the pilot action via local newspapers, radio and television. The information was met with a positive response among residents. Positive comments about the project information were posted on message boards via the Internet. Often the information appearing in one place was instantly multiplied on other websites.

Promotional activities were also carried out simultaneously with other ecology-related city events where the project was presented at a local level. The city strove to prompt citizens to adopt eco-friendly habits via parties and festivals, for instance those held on European Day without a Car and Earth Week. Whenever the city organises a conference that concerns ecology, REURIS is also invited and presented. The more the project is associated with environmentally-friendly endeavours through revitalisation, the bigger the knowledge and awareness is among citizens of the complexity of revitalisation projects and their benefits.

## **2.5.2.2 Conclusions and recommendations**

During the discussions held at the meetings, the procedures necessary to carry out a proper process of revitalisation was among the burning issues tackled. Other topics included the continuation of the activities after ending the investment at a later period and maintaining the long-term effects of the implemented revitalisation. The theme that was constantly brought up by participants as a good example was the pilot action in Bydgoszcz. This is proof that it is helpful when the theoretical principles of



---

revitalisation can be connected directly to practical issues, preferably to a particular location that the respondents are familiar with. Thanks to the process of implementation in practice, the revitalisation assumption data are based on actual experience. It is impossible to make a plan solely on the basis of theoretical considerations. Reflection on real life problems is the key to a meaningful discussion that leads to the achievement of constructive proposals.

The best results came from the meetings where participants constituted a diverse group of project stakeholders, namely policy-makers, professionals and future land users. Each of these groups had a particular approach to the subject and expressed different expectations. This assisted the REURIS team in developing a joint proposal.

During the work with stakeholders one thing that manifested itself was a rather low faith in the revitalisation process. Apart from a small group of enthusiasts, most of the attendees (residents mostly) expressed concerns whether the revitalisation process would be conducted at all, and even if it would be implemented, whether its effects would be consistent with expectations and possible to maintain in the long run. However, most of the meeting attendees with pessimistic attitudes were easily infected by the positive thinking of the revitalisation optimists when proof and arguments were given that there is a possibility of success for such projects.

The initial negative attitudes may have stemmed from the lack of public participation in the process of revitalisation in Bydgoszcz. In general, citizens are not accustomed to having their voices respected during investment activities conducted by the city. Positive experiences associated with the pilot project investment allowed the meetings' participants to realise that their voices are important in such processes.

All activities related to the change process in this pilot investment were undertaken with the participation of beneficiaries with the goal that such involvement of the local community and the institutions associated with the area would help them deeply identify themselves with the place, and recognise it as "their" own. Another related goal was that they could feel it was developed for them and *pro publico bono*. Such actions may lead to greater integration of local communities in the future, increased attention paid to the safe use of the area, reduction of vandalism, and finally the widespread belief in the positive effects of a properly conducted process of revitalisation.

## 2.5.3 Experiences in Brno

The focus of public participation and communication activities in Brno was on:

- providing information and promoting public participation in the context of the pilot action, and
- promoting intensive communication between the implementation team and property owners in the project area.

### 2.5.3.1 Providing information and promoting public participation in the context of the pilot action

#### Short description of the project

The Old Ponávka River is a 3.67 km long artificial water stream (mill-race) that flows very close to the city centre, through an old industrial zone in its northern section and through a residential and mixed zone in the southern section, and connects the two main rivers of Brno: the Svitava and Svatka. It is in an unsuitable condition, partly covered and generally inaccessible for the public. At present a gradual transformation in several of the industrial areas is taking place.

Our vision is to transform the Old Ponávka River in a blue-green axis integrated in the urban structure of Brno. The objective of this project is to produce a complex preparation of revitalisation of the Old Ponávka River and its surrounding territory that will include conceptual, implementation and dissemination phases. Expected positive impacts are revitalisation of the wider area, creation of new conditions for leisure and recreation, connection for pedestrians and cyclists between the Svitava and Svatka rivers, a new connecting element between the city centre and country-side, construction of a connected system of public green spaces related with the stream (green axis), allowing public access to river banks, ecological reactivation of the river and its waterfront and an increase in public awareness of the issue of urban river spaces.



Figure 2.5-5: Complex revitalisation study of Old Ponávka.  
(© City of Brno, author: 1. CERNOPOLNÍ)

---

## Communication strategy

The communication strategy for the revitalisation project of the Old Ponávka was prepared in April 2009 by the Environmental Partnership organisation in close cooperation with the main project representatives of the City of Brno with the goal of setting up a timeline and tools for communication with the public and local partners.

The strategy was based on the following points:

- This is a unique project in which the City of Brno is attempting to reincorporate the stream of the Old Ponávka into the life of the city.
- The project focuses on a relatively large area. The river flows through the Zábřovice cadastral area (Brno Centre and Brno North city districts), Trnitá (Brno Centre city district) and Komárov (Brno South city district) and has a length of approximately 3.7 km.
- The project is financed by EU funds, and other central European cities are sharing their knowledge and experience.
- The sustainability and implementability of the project rely on close cooperation with local partners such as property owners in the given area, local government and specialised, civic and non-government organisations.
- Interdisciplinary collaboration is still not a common practice in Czech cities.

The primary communication strategy goal was formulated in two key dimensions:

- as a need to inform involved entities and the broader public about revitalisation of the project area and to gain the support of these entities and the public for the resultant project design, and
- to enable participation of relevant entities in the planning of the revitalisation project itself.

Therefore the communication tools were particularly focused on:

- explanation of the importance of rivers and streams for quality of life in the city,
- information about the potential and specific forms of revitalised rivers in urban areas,
- integration of institutions and residents in planning revitalisation of the project area,
- securing support for the project from city-wide and city district politicians, property owners, experts, and the general public, and
- initiation of specific activities by involved entities leading to revitalisation of individual project locations, financed by private funds or grants.

With these goals in mind, the following three categories of communication target groups were set:

- groups actively leading the project, which include the local support group, property owners significantly involved in the project, local government (representatives of the city districts in the area) and the project consulting group,
- project support groups (interested members of the public), which include city-wide local government bodies, property owners interested in the project, local non-government organisations, associations, housing cooperatives and schools, and
- groups to be informed, understood as the unspecified broader public.

The following general criteria were selected to measure the success of project communication:

- public acceptance of the intention to revitalise the area,
- development of environmental consciousness among the public, and
- dissemination of environmental knowledge.

Specific indicators for the success of project communication were the number of articles about and references to the project in the press, the number of visitor hits on the project website, the number of visitors at exhibits and presentations, the number of participants attending public discussions and workshops, the number of contacts through e-mail and the number of local initiatives interested in the project.

In an effort to address all of the target groups, the following communication tools were proposed in the communication strategy for the Revitalisation Project of the Old Ponávka:

- **electronic bulletin:** 1-2 pages (A4 format) summarising the current status of the project, published approximately once every one to three months,
- **comprehensive report:** information material summarising the outcomes of the project phases, published twice a year in electronic or paper form,
- **project website:** simple Internet portal relaying project goals, timeline, partial outcomes and current project events and giving website visitors the option of filling out questionnaires and leaving comments,
- **articles in local bulletins** (*Metropolitan*, city district bulletins, etc.): articles and/or regular columns providing easy-to-understand information about project goals, timeline, partial outcomes and current events,
- **press releases, press conferences,**
- **exhibits,**
- **events:** social gatherings open to the public such as boating trips, river cleanups, etc., intended to popularise the project,
- **information panel(s):** information panel(s) providing information about project realisation in a simple way using attractive graphics and displayed in relevant places (such as the URBANCENTRUM, selected city government buildings in Brno and workshop locations), and
- **planning meetings/workshops:** public meetings relaying project goals, timeline, partial outcomes and current events and giving participants the opportunity to actively participate in project planning.

## Experiences and results

### Presentations and publications

#### *Electronic bulletin*

The original intention to provide an electronic bulletin once every one to three months was not possible to fulfil. The aim of creating a relatively periodic bulletin was adapted to the timing of the project, due to the rather lengthy gaps between the study design team's outcomes for each phase. An informational brochure for the public was distributed at public meetings and property owner meetings. The project website also served the same purpose to a sufficient degree. Important information and partial project outcomes were posted to the website (see below). Electronic invitations to public meetings and information about meeting results also partially substituted for the bulletin.

#### *Comprehensive report*

The project website proved to be sufficient for the purposes of regular information provision as all important information and partial project outcomes were posted there. Thus the initial idea to create a comprehensive report was abandoned.

#### *Project website*

An independent website, <http://www.ponavka.brno.cz>, was established for pilot action purposes in May 2009 and periodically updated. The website is easy to navigate, creative and has a modern design. It provides an appropriate amount of information. The main project outcomes to date have been posted on the website (namely, the complex revitalisation study of the Old Ponávka, student workshop results, meeting invitations and photos, etc.). Visitors may leave comments on the site, although this tool has not been used much.



---

### ***Articles in local bulletins***

The original communication plan included independent publishing by the project coordinator and by representatives of the city districts affected by the Old Ponávka revitalisation project. Some articles have been published in *Metropolitan*, the Brno-wide monthly bulletin, and in the quarterly bulletin of the Brno-South city district (called the *Southern Courier*).

### ***Press releases and press conferences***

Press releases were distributed to inform the public of the project outcomes of each phase and of upcoming public meetings. They found coverage in many of local/regional newspaper articles, TV reports and an interview for Radio Petrov.

### ***Exhibitions***

Three exhibitions were held as part of the project. The first, which was entitled “Brno’s Rivers and Waterfront”, was organised on the initiative of civic and expert groups wishing to draw attention to the history and significance of rivers to urban life in Brno. The second exhibition, organised as part of the Old Ponávka revitalisation project, focused on the designs developed at the university student workshop (see below). The third was focused on presentation of the whole project and its outputs. The Brno’s Rivers and Waterfront exhibition was installed in four key city government buildings during 2008 and 2009 (the Mahen Library, the Mendel Agricultural and Forestry University, the Vaňkovka Gallery and the Merciful Brothers’ Hospital). The exhibition of the students’ work took place in the Brno URBANCENTRUM from December 2009 through February 2010. The final exhibition of the project took place as well in the Brno URBANCENTRUM from May 2011 to July 2011. It summarised and presented the overall project, the implemented activities and outputs elaborated during its duration from September 2008. The public showed interest in the theme.

### ***Event***

The goal of the planned social gathering was to highlight the importance of rivers to urban life through an untraditional civic event that would be attractive to the media. The idea was inspired by a boating trip down the Svitava River organised in 2008 by the Veronica civic association that had been accompanied by lectures and cultural events along the riverbank. However, the planned social gathering was not implemented as part of the project. The main reason was the dissimilar character of the project area (the Old Ponávka stream corridor is not open to boats). A different, appropriate form of the social gathering was not conceived.

### ***Lectures and presentations***

Public presentations of the project included lectures for the public (at the Dům pánů z Kunštátu, 12 March 2009) and for students at the Mendel Agricultural and Forestry University (23 March 2009) and a presentation at the ENVI Brno Trade Fair (on May 2009).

### ***Informational brochure***

A brochure entitled “Examples of Good Practices of Revitalisation of Water Courses in Urban Spaces in the Czech Republic” was created as part of the project. The full-colour, 30-page brochure shows examples of completed stream revitalisation projects in urban areas. The brochure is translated into English for foreign partners and other interested parties. The brochure, which features quality photos (before and after comparisons) and brief evaluations of each project, was sent to approximately 100 institutions across the Czech Republic. A total of 400 copies were sent out. The brochure was also distributed in person to

project partners and others. The brochure mainly serves the purpose of introducing the concept and importance of stream revitalisation in urban areas for project partners as well as institutions not involved in the project.

### ***Information panels***

Five panels providing information about project realisation in a simple way were prepared for presentation in autumn 2011 in the project area along the Old Ponávka stream corridor.

## **Meetings and planning workshops**

### ***First meeting of the local support group***

An eleven-member local support group was established as part of the project. The group members included urban planners, architects, nature conservationists, water resource managers and other experts from private companies, the non-profit sector and academia. The purpose of establishing this group was to have a team of independent experts capable of advising and critiquing during the project. An initial group meeting took place at the outset of the project (29 January 2009). The group was later invited to other meetings and workshops.

### ***First public meeting***

The first public meeting took place on 6 May 2009 in the Vaňkovka foundry cultural centre. It was attended by 42 government representatives, property owners, experts and members of the public. With regard to communication, the meeting was primarily intended to introduce to the broader public the project's scope, purpose, main goals and anticipated timeline. Another goal of the meeting was to attract property owners' attention to the project area and invite them to become involved in the project. The first meeting received quite a favourable report in the media (live television report).

### ***Second public meeting***

The second meeting that was open to the general public took place on 9 December 2009, this time in the Brno URBANCENTRUM. It was attended by 27 people. The goal of this meeting was to inform the public about the research and analysis outcomes of the complex revitalisation study of the Old Ponávka and preliminary proposed measures for the area.

### ***Third public meeting***

The draft of the complex revitalisation study of the Old Ponávka was presented at the third public meeting. The meeting took place on 23 June 2010 in the Vaňkovka foundry cultural centre and was attended by 22 people. Each section of the project area was introduced in detail and a consensus was reached with property owners about the character of the measures, which were proposed for the next phase of project documentation development. The discussion about the presented designs was significantly influenced by the number and character of the participants. There was a discussion about the study design team's concept with a group of architects advocating a less natural approach to the design. Despite certain difficulties in the debate, valuable comments were gathered to inform the study design team's work.

### ***Fourth public meeting***

Detailed project documentation for revitalisation of three selected localities on the Old Ponávka was presented at the fourth public meeting. The meeting took place on 29 March 2011 in the Vaňkovka foundry cultural centre and was attended by 35 people. The meeting fulfilled its goal. Each section of the project area was introduced in detail. There was a general acceptance of proposed measures.



*Figure 2.5-6: The fourth planning meeting in Brno  
(© City of Brno).*

### ***Final fifth public meeting***



*Figure 2.5-7: The fifth public meeting (© City of Brno).*

The final meeting with the public took place on 28 June 2011 in the Urban Centrum and it was attended by 40 people. The aim of the meeting was to present the process of the whole project, its outputs and future steps. Also presented were successful examples of revitalisation in Prague. The meeting fulfilled its purpose and had generally good acceptance.

### ***Planning workshop with experts***

The research and analysis part of the complex revitalisation study of the Old Ponávka was followed by a planning workshop with selected experts. The workshop took place on 27 January 2010, once again in the Brno URBAN CENTRUM. Thirty-one of the invited experts took part. The purpose of the workshop was to discuss the overall vision for the project area. Most of the participants were experts with a longstanding professional focus on Brno's urban development from varying perspectives, such as urban planning, architecture, environmental protection, water management, transportation, etc.

### ***Student workshop and public presentation of workshop results***

A joint workshop composed of students from three universities (the Faculty of Architecture at the Brno University of Technology, the Mendel Agricultural and Forestry University in Brno, and the Faculty of Architecture at the Slovak University of Technology in Bratislava) was organised as a direct component of the development of the complex revitalisation study of the Old Ponávka. It took place on 26-28 October 2009, again in the Vaňkovka foundry cultural centre. A presentation of the workshop results was held at the same venue a day later on 29 October 2009 and was attended by 33 students, professors, the study design team, local government representatives, etc.

The primary goal of the workshop was to generate inspiring ideas for specific measures in the project area. The students designed measures for four areas selected by the study design team in order to enable the team to work with the student designs in the early analytical phase of the project. In this respect the meeting fulfilled its purpose and above all benefited the project through the close contact between the study design team and students and professors and the interdisciplinary character of the student teams' work. Once completed, the students' work was exhibited. The final versions of the students' work were also posted on the project website.

### *Development committees*

For the purposes of coordination, planning and evaluation of the complex revitalisation study of the Old Ponávka and detailed project documentations, several meetings took place between the main project coordinator, key representatives of the City of Brno, the study design teams, etc.

### *Meetings with relevant institutions*

In addition to meetings with property owners there was a series of meetings with affected and other relevant institutions, such as various departments of the City of Brno, the Moravia Watershed Agency (*Povodí morava*), Brno Water Supply System and Sewerage System Agency (*Brněnské vodovody a kanalizace*) and the Brno-South, -Centre and -North city districts. Representatives of these institutions were also invited to the development committees (see above).

## **2.5.3.2 Promoting intensive communication between the implementation team and property owners in the project area**

### **Strategy**

As early as the first public meeting it became evident that public meetings would not provide an appropriate setting for the required intensity and efficiency of key communication with property owners. Therefore the City of Brno Deputy Lord Mayor sent an official letter to all important property owners to inform them of the project aims, to obtain information about their own intentions for the area and to invite them to become involved in the project. On the basis of this letter, individual meetings were then planned and implemented.

### **Experiences and results**

Approximately 12 official meetings with about 20 representatives of important property owners took place during the development of the complex revitalisation study of the Old Ponávka. Other meetings took place during elaboration of detailed project documentation of selected localities.

Meetings with property owners fulfilled their purpose and in the vast majority of cases property owners expressed their support for the project's intention.



### 2.5.3.3 Conclusions and recommendations

Strengths and supporting factors:

- the project addresses an issue that is very topical in the Czech Republic and the City of Brno, which makes it media-attractive to some degree,
- the project is topical from the perspective of the significance of the project area, which has been neglected for many years but is also a potential development area (“the south centre” of the city),
- the main project coordinator had an active approach to communication,
- there was intensive personal communication between the implementation team and property owners in the project area,
- there was active public participation at public meetings (in the form of questions, comments and ideas for the study design team),
- holding public discussions in the Vaňkovka foundry cultural centre proved useful as the space is flexible (room set up can be changed per needs of the given workshop, exhibit, lecture, etc.) and the public already perceives this venue as a site for informal public discussions and of civic and student initiatives; the site is also centrally located and easily accessible,
- using the Brno URBANCENTRUM proved partially successful; the room is not particularly flexible but it is convenient for exhibitions, certain types of presentations and discussions and is also very centrally located and thus accessible; citizens perceive the URBANCENTRUM as a place to get information about the city’s development projects with the opportunity to fill out questionnaires about current projects, etc,
- existence of two universities in Brno capable of participating in similar projects,
- existence of non-profit organisations focused on nature preservation, urban planning and water management (Veronica and the Union for the Moravia River),
- relatively high level of project support by property owners, and
- relatively high level of project support by city politicians (e.g., the Deputy Lord Mayor) and city district politicians.

Weaknesses and hindering factors:

- insufficiently set (quantified) communication strategy goals, or another method of intermittent evaluation of strategy success,
- rather small number of participants at public meetings,
- difficulty to communicate to the general public about the complexity and scope of project area during the study analysis and design phases, and
- absence of an appealing communication tool (planned social gathering did not take place).

Problems and external obstacles to project communication:

- The complexity of some City of Brno development plans affecting the Old Ponávka revitalisation project area; for instance, there were strong discussions among professionals and city district representatives about a plan for a “new city boulevard” that may interfere with the revitalisation effort.

The Old Ponávka Revitalisation Project is one of the City of Brno’s first major efforts to plan and provide for rather intensive public and local partner participation from the very outset. This was undoubtedly encouraged by the fact that the project was financed through EU funds and implemented with active participation by foreign partners that consider public participation a necessary part of the implementation of important city plans. Monitoring of the communication element of the project was aided by the oversight of an external sociological consultant.

The established project goals and communication strategy were fulfilled. The project became well-known and accepted in Brno. At the present time, the key issue is to gain the consent of as many interested groups as possible (property owners, city district representatives, etc.) that are naturally most affected by the future implementation of the project. One can anticipate that there will be increased interest from

---

citizens and institutions in the next phase of the project as they may benefit from specific changes to the project area (development of the riverbank, park development, pedestrian and cycling paths, etc.).

The project also fulfilled the goal of raising public awareness of the environmental aspects of revitalisation of water courses in urban areas. The exhibitions, project website, quality project presentations at public meetings as well as the relatively high media interest are proof that the City of Brno representatives succeeded in finding a topical and important issue that is interesting for the residents of a city where rivers have always played a fairly important role. Information about the project is sought by young people who may have encountered the issue at their universities and/or in professional life (nature preservation, water management, architecture, urban planning, etc.), as well as older residents who feel a connection to the city's history and the transformations of its rivers.

In conclusion, one may state that the communication strategy was designed well, was adapted as the project developed and was fulfilled, notwithstanding from some partial, insignificant changes.

From these experiences, the following recommendations which may be applicable for other similar projects can be derived:

- Set evaluation criteria for the implementation of the communication strategy at the outset of the project.
- Include a website hit counter early on (to monitor the number of hits, hits during the project, hits on different reports, etc.).
- Provide a simple activity/project evaluation form for key public meetings and planning workshops.
- Plan and implement an untraditional, civic and media-attractive social gathering that will enable broad provision of information about the project.
- Continue with intensive project communication during the implementation phase (via planning workshops).

## 2.5.4 Experiences in Pilsen

The focus of public participation and communication in Pilsen was on:

- involvement of stakeholders in the context of the development of all of Pilsen's rivers and the concrete project on Božkov Island, and
- improvement of planning and implementation methods.

### 2.5.4.1 Involvement of stakeholders in the context of the development of all of Pilsen's rivers and the concrete project on Božkov Island

#### Short description of the project

In 2007 the Urban Planning and Development Institute of the City of Pilsen started to prepare a series of complex studies of revitalisation for Pilsen's rivers. Since beginning the project, the Institute has prepared 22 different detailed studies for three rivers, and other studies are in progress. The first step of the project was the preparation of complex revitalisation studies for the rivers Úslava, Mže and Úhlava (2009-2010). The conceptual design establishes the key principles to be observed in revitalising watercourses in build-up urban areas, as well as in open landscape. The aim was to evaluate the alluvial plains of rivers in terms of urban planning in urban areas, to protect nature and landscape and against floods in rural areas and to suggest suitable sites for sports and relaxation activities and facilities in connection with sport-recreational trails. Along all rivers in Pilsen is a "Territorial system of ecological stability". The main purpose of this system is to strengthen the landscape's ecological stability through preservation or renewal of stable ecosystems and linkages between them.

The most detailed preparation is available for the locality of Božkov Island. Božkov Island represents an area with great potential for sport and recreation linked to the cycling paths along the Úslava. So far, it has only been used in part by local sports clubs. However, most of the large area between the Úslava and the old mill race remains unused and is not maintained. A detailed land-use study proposes an architectural and landscaping solution that would extend and enhance the sports facilities. At the same time, it would maintain the natural and landscape value of this unique location. The study also assesses the possibility of relieving the mill race during floods by means of a bypass canal running across the island and back to the Úslava. This would make the site more attractive and protect the current and future sport facilities from frequent flooding.

The newly designed broad-base terrace and drainage canal will be between 20 and 30 metres wide. According to the design, the bottom of the terrace is located one metre below the surrounding terrain and the decline will be smooth. The canal itself will be two metres wide, and the water depth will be around 0.5 metres. By having a variable water level as planned, the water will be able to flow into several small lakes and ponds in the terrace. In the central section of the drainage canal, a children's water park will be built: a playground with water elements (water crossing along pontoons, a rope bridge, physical elements such as a water wheel, paddle turbine, well columns, a beam well, etc.). This offers young visitors safe, direct contact with the water and the opportunity to play with water and discover its physical properties. At the site where the canal drains back into the Úslava River, visitors with dogs will be offered access to the water by foot as well. The following are also included in the design: reconstruction of a multi-purpose sports pitch, beach volleyball added to two playgrounds, petanque added to two playgrounds, an in-line skating track, a children's rope climbing centre and a physical fitness path. Additional necessary measures were identified in the study such as the revitalisation of the Kolečovka slope and the creation of a footpath and lookout area, or the revitalisation of a mill race together with the removal of sediment and the

reinforcement of the left bank strip toward Božkov Island. Newly planted wood species, which would compensate for the hard surfaces in the design, are also included in the design.

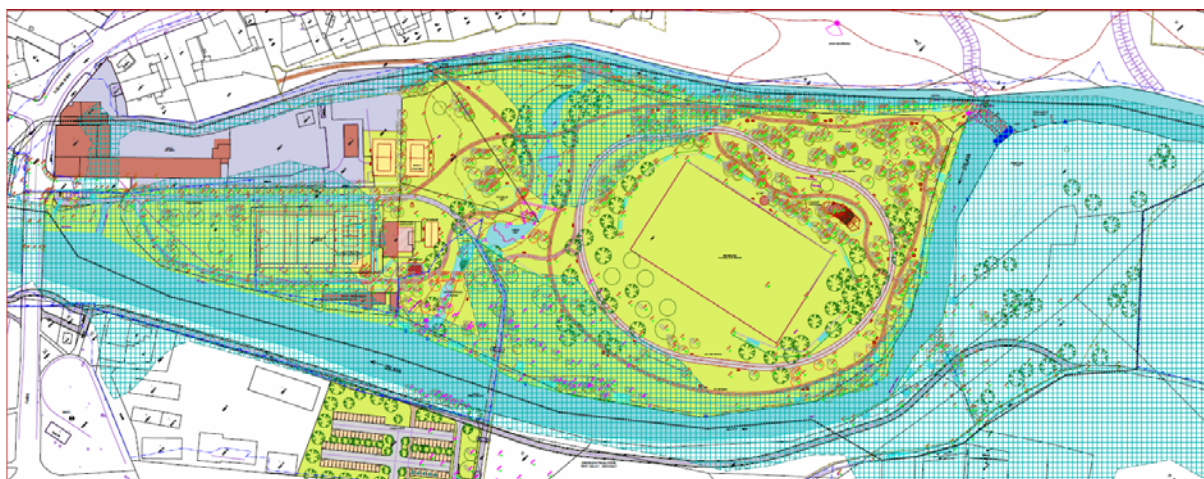


Figure 2.5-8: Božkov Island (© Architektonické studio Hysek).

## Strategy

Since in general the city or city districts are not land owners in river valleys, it was necessary to involve external stakeholders and the general public from the beginning of the project.

The plan for Božkov Island offers a relatively expansive and demanding list of proposed elements and objectives. Therefore, it was absolutely essential that the key players work together closely in the planning phase.

The strategy was:

- to start with general information for all stakeholders and the general public, in order to raise awareness of urban river revitalisation and to enhance their willingness to cooperate, and
- to continue with the involvement of particular target groups using appropriate methods.

The involvement of stakeholders and the public was accomplished by the following methods:

- informing stakeholders and the general public
  - City Magazine News
  - press releases in regional news media
  - reports on regional TV
  - events (exhibition, meetings, etc.)
  - meeting of the city assembly and of the city district assembly (all meetings are public)
  - websites
- involvement of stakeholders
  - arrangement of a basic informational meeting
  - cooperation with stakeholders during the writing of conditions for tenders for each documentation
  - working groups within particular studies
  - arrangement of meetings with landowners
  - meetings with authorities at the urban districts and city levels (e.g., committees, council, assembly, mayor)



---

## Experiences and results

### General meeting for all stakeholders including general public

At the beginning of the REURIS project a meeting for all stakeholders and the general public was prepared. The REURIS project was presented and some experts in this field introduced the options for achieving river revitalisation in urban spaces. The purpose of this meeting was primarily to give basic information before the next phase of the development of Pilsen's rivers, which was discussion about the particular studies.

### Working meeting during elaboration of studies

Urban Planning and Development Institute already cooperated with various municipal departments and other special organisations during preparation of the conditions for tenders for documentation. Those authoring studies are obligated to organise meetings during elaboration of the studies. Meetings with all involved organisations, subjects and stakeholders are called working meetings. During these meetings, the authors present a draft version of the studies. All participants can make comments and submit proposals for studies, which the authors try to integrate into the final version of the studies. The number of meetings depends on the difficulty of the particular study. This is a standard model of cooperation which is used within all studies that are prepared by the Institute. Sometimes the involved subjects during these working meetings did not want to present their opinions because they were afraid that they will be considered by the other participants as a binding attitude. For this reason, it is best to supplement the working meetings with several personal meetings only with particular authorities on their turf. They can then speak their opinions and it is possible to try to solve problems and find compromise.

### Meeting with landowners

The experiences with private owners have been varied. Most of Božkov Island is the property of the TJ Božkov sports club. The City of Pilsen and the owner successfully agreed on mutual cooperation and a property settlement. One plot of land owned by a private individual, however, could not be purchased or swapped. As a result, the proposal had to be adapted so that this plot of land would not be affected. Close and successful cooperation was also forged with the private owner of the original mill race. The project to revitalise the mill race is entirely essential in order to build the anti-flooding broad-base terrace and drainage canal across the island. This documentation was submitted all at one time and the design engineering work was coordinated successfully. But behind all of these successes, there was a lot of work, unflagging efforts and plenty of patience on the part of all those who were involved.

### Public meeting for particular studies

Some localities were selected along each of the four rivers in Pilsen for which the elaboration of detailed studies was planned.

At the beginning of the preparation of these studies many public meetings were organised, which were intended primarily to identify the needs and wishes of local residents. The conclusions from these meetings with citizens were provided to the authors to form the basis for preparation of the studies. The main problem encountered during these public meetings was that the citizens very often wanted to find solutions to different projects that were not connected with the revitalisation of river spaces. Also, they were afraid that the realisation of the revitalisation project would draw from the financial sources for more important investments (such as technical infrastructure, etc.). For this reason the discussion was sometimes not constructive or useful.

---

## **Cooperation and involvement of policy makers at the city district level and the city level**

After finishing the documentation it is necessary to start the agreement process at the level of the city districts and after that at the city level. This is a long procedure, because each study has to be introduced in the City District Committees and the City District Councils and after that to the city-level committees, City Council and City Assembly.

### **Exhibition**

An exhibition in the City Garden introduced the results of the REURIS project to all citizens and visitors. At the event, all studies prepared within the project and future plans were presented, and information how to improve the realisation of revitalisation projects in river valleys in general.

## **2.5.4.2 Improvement of planning and implementation methods**

### **Strategy**

In the process of preparation and consultation of the project documentation, very close cooperation was necessary between all the important and involved special organisation and subjects including the Urban Planning and Development Institute of the City of Pilsen (the contracting authority and author of the master plan of the City of Pilsen), the City of Pilsen, the Department of Municipal Property Acquisitions (the administrator of city land, investor of realisation and payer of maintenance costs), a representative of state authorities (the Ministry of Environment) and others (e.g. departments responsible for observance of state legislation) and the Vltava state enterprise:

- cooperation and consultation with experts in meetings and daily consultations (mail, telephone and face to face), and
- procuring of independent expert opinion.

## **Experiences and results**

### **Workshop with experts**

Participants in this meeting were external experts on revitalisation, economic and social issues who cooperate with the Urban Planning and Development Institute of the City of Pilsen on river revitalisation projects in Pilsen, as well as revitalisation experts from Brno and the City of Prague and representatives from the Ministry of the Environment of the Czech Republic. The representatives from the Ministry of the Environment who were present contributed to the discussion with information about support for close-to-nature management of watercourses and flood areas, and the opportunities for receiving funding from the Operational Programme Environment. Representatives from the City of Prague and members of the consultation group shared with all participants their experiences with revitalisation projects.

Consultation with experts was not only about meeting but primarily it was about almost daily communication with members of the consultation group, authors of the study and other experts in the field of revitalisation.

---

### 2.5.4.3 Conclusions and recommendations

The revitalisation of rivers in urban areas is possible, but only with the right approach and under special conditions. In urban areas it is necessary to respect the capacity and stability of watercourses. For this reason, there are different approaches to revitalisation in rural and urban areas. The most important factors of revitalisation in urban areas are flow capacity, stability (the biggest ecological value which is possible), aesthetic design and a combination of revitalisation and flood protection.

From the outset the broadest scope of specialists, relevant organisations as well as owners and users discussed and worked on the objective. Many meetings, professional consultations and public hearings were held. Thanks to excellent cooperation, agreement about the project with a high degree of detail was achieved in such a short period, and hopefully it is heading gradually toward successful implementation.

The most important lesson is that participants are more approachable if the project is introduced to them from the very beginning of the process of preparation, research and analysis. The most effective approach was to meet separately with particular participants and to collaborate on finding solutions.

Conclusions and recommendations from experts include:

- It is necessary to be careful when preparing the conditions for the tender, since not many authors have experience with this kind of project and it is necessary to determine appropriate requirements for qualification.
- As a part of good preparation for public meetings, it is necessary to know about other (problematic) projects in those city districts which citizens might want to solve (technical infrastructure, etc.).
- Factor into the plan not only the costs for realisation of the project but of course the future administrative and maintenance costs.

## 2.5.5 Experiences in Stuttgart

The special focus of public participation and communication activities in Stuttgart was on:

- providing information and promoting public participation in the context of the pilot action and future scenarios, and
- general improvement in planning and implementation and in cooperation among parties involved in urban river revitalisation and fostering urban river revitalisation.

### 2.5.5.1 Providing information and promoting public participation in the context of the pilot action and future scenarios

#### Short description of the pilot action

The REURIS pilot action in Stuttgart comprises the revitalisation of the Feuerbach Stream and an adjacent brownfield on the fringe of Stuttgart. A former sports field that has lain idle since 2002 and the paved river banks of the Feuerbach are supposed to be demolished and the stream course to be transferred to the middle of the floodplain. Meander zones and shallow water areas will enhance the biodiversity by creating habitats with various local conditions. The meandering course is meant to be accompanied by new cycle paths and footpaths. Thus, the project is going to add to the system of green axes in Stuttgart. The renaturation in the area of the former sports field is supposed to be only the beginning of long-term revitalisation and sustainable development of the whole Lower Feuerbach Valley as far as Mühlhausen.



Figure 2.5-9: Draft plan of revitalisation of the Feuerbach Stream in Stuttgart developed by Planning Office Geitz & Partner (© City of Stuttgart).



---

## Participation and communication strategy

As the area of the pilot action was already the property of the City of Stuttgart there was no legal need to involve external stakeholders. Nevertheless, all relevant stakeholders were involved.

As there is no scope for substantial modifications in the area of the pilot investment, the REURIS team decided to focus efforts at public participation on the intended continuation of revitalisation downstream, but nevertheless to inform the public about the proceeding of the pilot investment.

The following strategy was compiled:

- meetings with district mayors and district councils, with affected people (owners, farmers) and with locally engaged groups (the biotope network planning work group),
- future conference (all stakeholders),
- events (visits to the building site, guided walks),
- meetings with administration departments and the planning office, and
- public relations (press releases in the context of concrete events, REURIS website, events, exhibition).

The REURIS project and the pilot action were also used as vehicles to convey general messages about urban river revitalisation. The meetings aimed at raising awareness of the benefits of river revitalisation, at exploring the possibilities and limits with regard to the continuation of revitalisation and at finding solutions through consensus.

As theoretical issues with regard to urban river revitalisation do not meet with much public interest, public relations efforts were mainly restricted to the practical implementation of the pilot action and future scenarios.

## Experiences and results

### Meetings with district mayors and district councils

The district councils in Stuttgart have to be involved in planning which concerns their district. The district councils and district mayors affected by the pilot action support both the pilot action and the further development of the Feuerbach Valley as contributions to the enhancement of the quality of life in their districts. The meetings helped to identify the most important stakeholders which should be involved. Furthermore, the mayors and councils represent the interests of their districts in relation to the city council and are important as multipliers.

### Meetings with affected people

In order to implement a better solution for the pilot action an adjacent site was needed. After the formal request of the Department of Stocks and Properties was rejected by the owners of this site, the REURIS team met with them and explained the plans. A compromise could be achieved: the owners allowed the use of a piece of their site in exchange for another piece of land less important for the pilot action.

The farmers are the most affected stakeholders by the planning of the future scenario for the Lower Feuerbach Valley (continuation of the pilot action). The meeting with the local farmers' associations aimed at exploring the possibilities for further revitalisation of the Feuerbach Valley (such as acquiring needed land) and at finding solutions by consensus. The farmers are willing to cooperate if they are compensated by payment or land exchange. It became clear that they are not able to cultivate the floodplain economically by farming it as meadows or pastures. Thus, there is need for an innovative solution in the specific context and the need of considerations and concepts about sustainable land use in floodplains in urban areas in general.

---

## Meetings with locally engaged groups

As all affected stakeholders are members of a workgroup called the Biotope Network Planning Mühlhausen and Zuffenhausen/Zazenhausen (including farmers, local politicians, city administration representatives, NGO representatives, landscape planners and interested citizens), it was an appropriate platform for discussion of the pilot action and the future scenarios. The meetings helped to reveal local knowledge about the situation, demands, needs and conflicts, and to explore the possibilities of further revitalisation. Inspired by the presented plans and ideas, the workgroup developed a paper outlining their long-term aims for the development of the Feuerbach stream and the Lower Feuerbach Valley that supports the ideas of the planning department. It now serves as a bottom-up statement directed toward decision-makers supporting the ideas of the future scenarios. During realisation of the project people complained of pavements in parts of the project area. This revealed that the executive organisation had omitted to provide information about the necessity of these measures. This was made good for by guided tours with the planner and inhabitants.

## Future conference

At the beginning of the REURIS project it was intended to hold a future conference and to invite stakeholders (adjoining owners, residents, farmers, citizens' associations, land owners, city administrative staff, local politicians and the interested public) to participate and bring forward their ideas and concerns. However, this idea was abandoned following discussion with planning experts. It became clear that a future conference, as a method of participation at the level of co-determination or even delegated power, is not an appropriate method for an area of high importance for nature conservation, since such a situation requires mainly ecological solutions with little leeway for considering the ideas and demands of citizens.

## Meetings with city administration departments and the planning office

The progress of the pilot investment and future scenarios were also discussed with the "administration" workgroup which was set up in the context of REURIS and allowed for a coordinated strategy. Additionally, the REURIS team met several times with the city's landscape planner and a representative of the Department of Civil Engineering, which is responsible for the realisation of the project, to discuss the requirements for and possibilities of the pilot action and the progress of the pilot action. These discussions led to a modified plan with a better solution. Due to lack of staff and time and due to the illness of a staff member the planning process took a very long time.

## Press releases

Press releases with regard to concrete events were limited due to the delay in the implementation of the pilot action. They were provided in the context of the public presentation and the public planning workshop. The public planning workshop met with significant media interest and was written about in articles in two of the regional media. Some meetings and events with regard to the pilot action and future scenarios were covered by the local newspaper. A public presentation in English was not covered.

## 2.5.5.2 General improvement in planning and implementation and in cooperation among parties involved in urban river revitalisation and fostering urban river revitalisation

### Strategy

In order to raise awareness throughout the city's administrative departments and political committees of the manifold benefits of urban river revitalisation, and to foster support from these committees and in order to share experiences and discuss planning and implementation methods and methods of public participation, the following strategy was followed:

- establishment of a REURIS “administration” workgroup,
- presentations to political committees,
- meetings with stakeholders,
- meetings with experts,
- events, and
- public presentation and (public) planning meetings.

### Experiences and results

#### REURIS “administration” workgroup

In Stuttgart there are five departments with various sub-departments that are mainly involved with revitalisation projects. In order to improve cooperation between them and to discuss and improve planning and implementation methods with regard to revitalisation projects, and to develop future scenarios for the rivers and streams in Stuttgart, the REURIS “administration” workgroup was brought into life. The institution responsible for tourism, the Department of Economic Promotion, and the administrative offices for regional planning were invited to participate, too. Topics covered included the overall aims of revitalisation of urban river spaces in Stuttgart, the pilot action, improvement of cooperation and the development of specific guidelines for different catchment areas.

Members of the workgroup agreed on the following issues:

- The departments should cooperate more. They should follow a joint strategy to better convince decision-makers by pushing projects in the city council, issuing joint press releases, organising exhibitions and involving of district councils.
- It is necessary to raise awareness of the manifold benefits of revitalisation projects. In particular, economic benefits are perceived but often not taken into account.
- Revitalisation projects should focus on whole rivers or streams, not only on spotty measures.
- For the streams in Stuttgart specific guidelines do not exist. As guidelines can help to avoid mistakes and misunderstandings between departments, the workgroup agreed to develop specific principles for each catchment area of Stuttgart starting with the Feuerbach.
- Public relations and public participation can help to support revitalisation ideas and to generate pressure on the political committees. It should be a goal to look for allies from outside the administration and to raise expectations among residents.

Most of the workgroup members appreciated the initiative to meet regularly and to improve cooperation, and expressed their hope that revitalisation projects could be fostered and better implemented by improved cooperation between departments. They agreed that the meetings should be continued, but it is not certain if this is possible after the completion of REURIS due to the staff's lack of time.

---

## **Presentations to political committees**

The REURIS project was used as an opportunity to present the issue of urban river revitalisation to political committees such as the Committee for Technical Affairs, Environment and Planning as well as the city council. The Sub-department of Landscape and Green Structures Planning was granted a budget to develop preliminary drafts on Neckar projects.

## **Meetings with stakeholders**

The above-mentioned meetings with stakeholders also helped to raise the general awareness of urban river revitalisation projects.

## **Events**

In order to demonstrate the relationship of the pilot action with other projects in the north of Stuttgart and other sections of the Feuerbach a cycling tour was organised for landscape architects and town planners from the city administration.

## **Public presentation**

A public presentation about the REURIS project and the pilot action was held (“Rivers and Streams in Cityscapes”, 3 November 2009). The event was the first presentation of REURIS and of the pilot action to the general public, was held in English and dealt not only with the pilot action but also with theoretical topics. Thus, the attendance was low and the media did not cover the presentation. Additional public events should focus on local issues and be held in the local language.

## **Public planning workshop with experts on planning and implementation methods**

The public planning workshop called “Living Spaces for Man and Nature – Strategies and Methods for Successful Project Implementation” was held on 5 March 2010. Experts from the states of Baden-Württemberg and Bavaria (landscape planners and staff members of cities with broad experience in revitalisation projects) were invited to present successful projects and the respective keys to success and the most difficult obstacles. The workshop met with big interest. It was attended by about 100 participants (city planners, landscape planners, local politicians, members of the city council, local stakeholders and interested people) and covered by two media articles. The REURIS team got a lot of positive feedback. This shows that the issue of river revitalisation is topical and that exchange and discussion is appreciated and assumed to be very helpful in promoting revitalisation projects. Among other things, the experts stressed the importance of close cooperation between the persons who are involved and close contact with affected people, the significance of public participation and public relations, the relevance of suitable planning strategies following a holistic approach as well as the need for sufficient resources such as staff and financing.

## **Planning workshop with experts with regard to public participation**

In order to share experiences with public participation, various experts (14 participants) were invited to present their experiences at a workshop called “Revitalisation of Rivers and Streams in Stuttgart – How to Bring Players Together” on 16 July 2010. The presentations dealt with revitalisation projects as well as social projects and projects of city development. It turned out that the framework and the tools useful for these different types of projects are similar and comparable. The workshop proved to be helpful to the



participation and public relations activities of the pilot action. Many recommendations with regard to public participation were given.

### First planning workshop on future scenarios

The first workshop with experts from various departments in Stuttgart (on 12 November 2010 with 12 participants) dealt with the development of particular guidelines for the streams and the Neckar River in Stuttgart in order to make future revitalisations easier. The discussion involved the special needs and requirements of river revitalisation in urban areas, especially where it is not possible to reconstruct the natural state of rivers and streams due to substantial changes. However, the particular typology and uniqueness of each water body has to be considered with regard to the use of material or the structure and shape of the revitalised stream. Furthermore, revitalisation in urban areas has to consider social factors and cultural history. Additionally, in times of confined budgets a balance has to be found with regard to the intensity of maintenance between the poles of intensive biotope maintenance on the one hand (or conservation as a museum) and leaving areas to succession on the other hand (or allowing change). The staff members agreed to jointly develop specific guidelines for the different catchment areas in Stuttgart.



Figure 2.5-10: Workshop on planning and implementation methods, March 2010 (© City of Stuttgart).



Figure 2.5-11: Workshop on future scenarios, November 2010 (© City of Stuttgart).

### Second and third planning workshop on future scenarios

In the context of REURIS, the Sub-Department of Landscape and Green Structures Planning developed three scenarios for the continuation of the Feuerbach revitalisation and a concept for the Neckar Valley in Stuttgart (“Landscape Park Neckar in Stuttgart”) with in total 18 projects. The second and third workshops with experts from various departments in Stuttgart (01 February 2011, with 16 participants; 23 August 2011 with 18 participants) dealt with these future scenarios (The status of selected projects on the Neckar River was presented and discussed in order to reach consensus about the approaches chosen at an early stage and to follow a joint strategy to promote the projects with decision-makers. Agreements were reached and the planning of projects is in progress.

### Presentation of future scenarios to political committees and the public

The concept “Landscape Park Neckar in Stuttgart” was also presented to the city council and seven district councils. Media and the public were invited. As a result, the concept met with wide approval, several press articles covered the projects, inhabitants proposed additional ideas and foundations conveyed interest in financially supporting the projects. Furthermore, the city council decided to allocate budget means to continue the planning of three projects for a start.

### 2.5.5.3 Conclusions and recommendations

Experience with the REURIS project allows the drawing of the following conclusions:

**Public participation and public meetings proved to be helpful** in getting support from inhabitants and decision-makers. From the start, the pilot action in Stuttgart met with substantial interest and support from the local people. Although there was no opposition to the project, as most of the land was the property of the City of Stuttgart, the meetings helped to raise expectations and thus to push the project forward. Furthermore, the meetings helped participants to get to know each other and thus to sow the seeds for a good basis for the negotiation of future scenarios, where the conditions will be more difficult. Additionally, it proved to be helpful to maintain direct and personal contact with affected people, such as property owners if land is needed, beyond the formal inquiry of the Department of Property and Stocks.

**Public participation requires personnel and financial resources.** Due to lack of staff and time it is not possible to regularly involve stakeholders to the most desirable extent; whether or not public participation is worthwhile has to be weighed for each individual project.

**Public participation does not replace sectoral planning.** The wish to go beyond the level of participation of information or consultation toward real participation has taken into consideration the focus of the project. Naturally, for projects where ecological factors have priority the possibility of involving the broad public with low sectoral knowledge is limited due to the precedence of scientific factors. In such cases, the broader public can be involved in the discussion of general issues while the details should be entrusted to professionals. In conclusion, the communication and participation strategy has to be properly adapted to the specific conditions and needs of each project.

**Cooperation and processes of coordination take time.** Thus, it is sensible and helpful to start very early with the involvement of all necessary institutions and departments. The cooperation and meetings with other departments in the context of REURIS helped the project to follow a coordinated strategy and to get the support in the course of the pilot action and for future scenarios. However, in a big city like Stuttgart with a huge administration and various departments involved, these processes of cooperation take a lot of time. The departments are located at different sites within the city, and thus meetings are not so easy to organise and the casual exchange of information by talking “while passing in the hall” is not possible. Therefore, for revitalisation projects in big cities the creation of a coordinating department or team may be helpful. However, during the REURIS project cooperation was improved since the staffs were willing to cooperate and to follow a joint and coordinated strategy to foster revitalisation projects.

**Public relations should focus on concrete projects and actions.** The experience of public relations with REURIS and the pilot action showed that general and theoretical issues with regard to river revitalisation are not of interest to the general public. Therefore, public relations and the attempt to raise awareness should be organised in reference to specific, concrete projects.

**The planning meetings and workshops with professionals helped to raise awareness and call attention to river revitalisation.** Furthermore, they helped city administrators reconsider the existing planning and implementation methods and learn from each other. Unfortunately, normally the city lacks resources to organise (public) planning meetings.

The experiences gained from REURIS and planning meetings with professionals resulted in the following recommendations with regard to public participation:

- Develop a customised communication and participation strategy at the project outset.
- Provide enough resources (staff, financial means) for public participation.
- Start the participation process right from the start of the project, and involve external stakeholders at an early stage.
- Take into account that the coordination of revitalisation projects takes a lot of time, particularly in a big city with a huge administration. Thus, start early with the involvement of all departments and institutions needed.

- 
- Take an individual approach toward affected owners.
  - Look for allies from outside the administration who share your goals to gain support for your idea and have the idea spread (multipliers).
  - Involve the planning expert and consider the involvement of a professional communication agency or of an external moderator.
  - Mobilise supporters, but also integrate opponents of the project and identify the “usual suspects” and care for counterbalance.
  - Make sure that people are aware of all aspects of the project, e.g. if technical solutions or unpopular measures are required that may not meet with the inhabitants’ approval. Explain them in advance.
  - When scheduling events and meetings consider holidays and mega events (such as the World Cup). Announce meetings and information events well ahead of time.
  - Choose the location of your event or workshop carefully in order to attract people. Create a comfortable atmosphere at the event location.
  - Bear in mind that it takes people away from their leisure time to be part of the participation process and thus, think about how to motivate them. Allow citizens to present their ideas to the city council themselves.
  - Show people that you appreciate their participation by giving them feedback.
  - Use public relations to support revitalisation ideas and to generate pressure on the political committees.

## 2.5.6 Experiences in Leipzig

The special focus of public participation and communication activities in Leipzig was on:

- information about and public participation in the pilot action and future scenarios, involvement of local players to make them aware of the project and improvement and promotion of collaboration by participants in urban river revitalisation within the framework of the Thostgrundbach pilot action,
- involvement of local stakeholders in order to raise public awareness of the importance of revitalised urban rivers, and
- raising awareness of economic aspects of urban river revitalisation.

### 2.5.6.1 Information about and public participation in the pilot action and future scenarios

#### Short description of the pilot action

The Thostgrundbach Stream is the most important water body with confluence into the Mulde River within the urban area of Grimma. More than 90% of the Thostgrundbach is piped and reduced to technical functionality as drainage, amelioration and run-off capacity for dewatering of rainwater. As far as possible, this creek shall be reopened, renaturated and hence the natural capability of retention shall be renewed. Opening and renaturation of the water body are scheduled for an area where the creek flows in a valley (defined by the drainage area).

A 'pure' renaturation of the local water body and the Mulde will not take place, but the water body sections in the Thostgrund will result in noteworthy flood prevention effects. The ecological effect of such activities clearly is undisputed. Only with effective retention, which should be as consistent as possible with the original natural setting, can positive effects be realised for the local water body, and, with the participation of all residents, for the entire water body. So far, in comparison to the Mulde, the possible relief for the Thostgrund lies in the range of per mille. But considering the fact that more than a thousand of small watercourses flow into the middle and upper reaches of the Mulde, there exists a considerable potential.

## Experiences and results

### Presentation to the city council

The Thostgrundbach project had already been the subject of long range planning. The first study of the possibilities of realisation was carried out in 1993. Subsequently the first presentation took place in the city council of Grimma. The decision of the city council for the continuation of the measure at that time failed due to a lack of financing and promotion. A new presentation to the city council of Grimma took place in 2006 which showed the results of a second study including hydrological analysis. Subsequently in the following meeting the city council decided to pass the measure through possibilities of promotion.

### Meetings with owners and users of the water body

Among other things, the planned measure did affect private properties which were not owned by the city of Grimma, including the property of a kindergarten and of a garden branch. Indeed the purchase of different properties took place, but could not be realised to the needed extent. Therefore up to now only a part of the project can be realised and only part of the pipe work can be removed. Furthermore, a big part



of the Thostgrund is property of the Bodenverwertungs- und -verwaltungs GmbH (BVVG). A long back and forth with the owner resulted in the fact that the BVVG property is no longer part of the project. Thus, the plans changed again. In March 2011 the project was presented again to the general meeting of the garden branch in the area of the Thostgrund and obtained wide acceptance.

One of the most critical questions in the case of Thostgrundbach was and still is the question of property. Public problems, as far as citizens themselves are not affected, are of secondary importance. From today's point of view an assessment planning would be preferable regarding such a project, because in such a process the questions of property are included. In process of obtaining the planning permission as used in the case of Thostgrund, these questions had to be cleared beforehand. Due to the huge effort to receive planning permission, the aim possibly could have been reached earlier by means of assessment planning, particularly since a part of the project still cannot be realised because to this day not all property relations were fully clarified.

### **Press articles**

The first reports with respect to the Thostgrund project appeared in the local media. Transmissions thereof no more are available since the big flood of 2002. The city of Grimma then was flooded to a great extent and also the town hall fell victim to the flood.

### **Presentations to the public**

Presentation of the project started in 1993. In a public presentation in 1996 for the first time the wishes and fears of the residents, members of the garden branch and users of the water body were expressed. As a result, an agreement was made in the interest of nature protection to reject the artificial tapping of a spring of the Kleingartenquelle/Teufelsquelle and to reject improvement of the paths in the upper Thostgrund. This meant that the features desired by the garden plot holders were no longer part of the planning procedure.

### **Inclusion of experts and coordination with the City of Grimma**

During the whole lifetime of the project meetings took place with regularity (every two to three months) for the purpose of communication and coordination about the status of the project with experts from the Landschaftspflegeverband Muldenland e.V. and the Landschaftsplanungsbüro Dr. Bormann & Partner GmbH, who were charged with the realisation. The meetings dealt with the following topics:

- choosing of the plan for the Thostgrund as the REURIS pilot project,
- definition of the preparations for the realisation of the pilot project,
- preparation of the study regarding the pilot project Thostgrundbach,
- proceedings for approval of the construction associated with the pilot project,
- requirements for the call for bids for the pilot investment, and
- assistance for and monitoring of the realisation of the construction project.

### **Communication with authorities and administration**

Since the start of the project, regular consultations with the Lower Water Authority and departments of the City of Grimma including the Department of Environment for planning assessment and finally for planning approval took place.

---

## **Excursion**

On the 26 October 2010 an excursion to the Thostgrundbach took place during the REURIS partners meeting in Leipzig.

## **Exhibitions and presentations (extract)**

During the EUREGIA 2010 from 25 to 27 October, the REURIS project and the Thostgrundbach pilot action were presented to the general public. On 24 September 2010, the REURIS project and the Thostgrundbach project were presented to the public at the University of Leipzig.

## **Consultations with professionals**

Before the planning approval process began, public agencies, regional providers and environmental associations were consulted. Due to their participation, the project became known to and was evaluated by the professional public.

### **2.5.6.2 Involvement of local stakeholders in order to raise public awareness of the importance of revitalised urban rivers**

For the University of Leipzig the aim of public participation and communication activities was to involve local stakeholders to raise their awareness of the past and present development of the Karl Heine Canal and the consequences of touristic and leisure usage of the water body. The activities also aimed at increasing responsibility for the preservation of the high value of the revitalised canal in an urbanised area.

## **Short description of the project**

After a first phase of intensive research and communication with local stakeholders and water-related associations, the team of the University of Leipzig developed a number of activities relating to the Karl Heine Canal. The REURIS team had the goal of organising further development and laid great emphasis on the objective of involving as many suitable stakeholders in every single activity as possible.

## **Strategy**

The project consisted mainly of four steps. First it was necessary to learn as much as possible about the local conditions and potential target groups. In a second step these groups had to be addressed, to be informed about REURIS in general and the Leipzig initiative in particular and had to be brought together wherever necessary and suitable. The third step concentrated on the search for suitable partners with respect to each planned activity. And finally the stakeholders involved had to be guided through the implementation and realisation process of each initiative.

## **Experiences and results**

### **Public information meetings**

The University of Leipzig made use of public information meetings at an early stage of REURIS. The team presented the project idea as well as the short and medium term aims of REURIS in Leipzig at one

of the regular public meetings of a water-related association close to the project area, the Karl Heine Canal (Wasserstammtisch, Verein Wasserstadt Leipzig e.V.). The event combined two important purposes: Using the institution of the “regulars’ table” integrated with the particular association called Wasserstadt Leipzig e.V. as a partner to the project, thus laying the groundwork for the association’s support of the project aims to distribute the ideas of REURIS and to involve possible stakeholders. Furthermore, the meeting was a well-established instrument in which to embed the presentation in a water-related context and to reach the broader public.

As a variation of the “regulars’ table”, the University of Leipzig invited various stakeholders to a meeting named “Scouting the Canal”. About a year after the first meeting stakeholders paid a visit to several sites at the canal and received a project update. Without meetings of this kind some of the goals of the project would not have been reached, such as the development of a continuous relationship with people and professionals from the project area. Stakeholders had been directly addressed, had met in a context supportive of the project aims, and had been shown respect and given special attention which positively influenced their support for further project activities.

### **Intensification of relationships between citizens and different institutions**

During the REURIS project, the team of the University of Leipzig initiated various opportunities to allow stakeholders to meet and get ideas realised. Particular emphasis was laid on the intention to encourage meetings between citizens and representatives of different institutions who had not yet been in regular contact. For example, an initiative called “Water fleas in Action” (*Wasserflöhe in Aktion*) proved to be particularly successful in this respect: Aiming to develop children’s environmental consciousness in the REURIS project area, this effort engaged school teachers, environmental educators, conservationists, adventure educationalists, museum educators and city departments. For about a year they met in varying groups, cooperated on the topic of the water flea initiative, and thus intensified their relationships. For this programmatic approach the team of the University of Leipzig was awarded the Leipzig Agenda 21 Prize in 2010.

The initiatives “Building a Rope Bridge over the Karl Heine Canal” and “Designing Public Seating on the Banks of the Canal” were similar ways of getting stakeholders in touch with the waterway and with each other. The University of Leipzig developed a programme for the activation of socially disadvantaged youths. The REURIS team coordinated with representatives of a local technology centre for young adults, experts on experiential education and outdoor training, numerous adolescents and the local public. The focus of the initiative was on the construction of a rope bridge by the participants. By working together on this project the participants learned about each other, about the canal surroundings and the importance of respect and trust for each other and toward “urban nature” as well.

“Designing Public Seating on the Banks of the Canal” drew attention to the amenity value of the project area for visitors, passers-by, children, adults, seniors, and others. A site visit brought stakeholders and design students in contact and resulted in more than 40 sketches for public seating at various places. After several presentations and meetings with representatives of city departments, two of the sketches were identified as exactly meeting the needs of city planning and urban development in the area. These sketches have been bought by the city and are now in the process of realisation.

### **The “Canal Neighbourhood” initiative**

The “Canal Neighbourhood” (*Kanalnachbarschaften*) initiative, also developed by the University of Leipzig, is an innovative way of using the Internet for participatory purposes. “Canal Neighbourhood” is the name of a web training course that focuses on the Karl Heine Canal in Leipzig and especially on the institutions, associations, small and medium firms, local restaurants, cafés, pubs, public facilities like playgrounds, galleries, etc. What they all have in common is that they are close neighbours to the canal. The project participants got in touch with all of them, visited them, discussed their particular approach to the canal

and finally presented this information on a new website especially created for this purpose. This procedure created an intensive communication and exchange structure. As a result, the website team and all participating stakeholders successfully funnelled their commitment to the canal into a new web-based medium.

### **2.5.6.3 Raising awareness of the economic aspects of urban river revitalisation**

#### **Strategy**

In order to share experiences and discuss economic aspects of urban river revitalisation, a workshop with professionals was organised by the University of Leipzig. This topic was also focused on with students.

#### **Experiences and results**

##### **Public planning workshop with experts on economic aspects**

A public planning workshop called “Financing Options for the Revitalisation of Urban River Spaces” took place on 3 February 2010 at the University of Leipzig. The main objective was to share up to date experiences with this topic in Germany. Therefore, the workshop was addressed to experts from municipalities, business companies, redevelopment agencies, and water body authorities. About 20 participants took part. The workshop was divided into five units: thematic introduction, overview of financing options, cooperation with foundations, project examples related to funding and economic evaluation and the funding of “green infrastructure”. Each unit contained up to three presentations and a discussion. The attendance of various experts from the field of urban river revitalisation provided a good opportunity to obtain a comprehensive picture of the experiences with this topic in Germany to date. This information was useful for the further development of the REURIS project.

The results of the workshop can be summarised as follows:

- Concerning imposition of taxes and involvement of private beneficiaries, a combination of both instruments is necessary.
- According to the Water Act of Saxony and of Baden-Württemberg, private involvement is possible.
- To date there have been no public-private partnerships in the field of river revitalisation in Germany. Within a public-private partnership, municipalities do not hand over any rights or authority. They can always decide on management of their watercourses. The benefit for a municipality provided by a public-private partnership consists in financial security during the length of time of the project.
- Cooperation with foundations is an important source of support for municipalities in their river revitalisation projects.
- Concerning projects in formally designated redevelopment areas, it is important to distinguish between the watercourse and the waterfront. Only in this way can subsidies for the different sections be applied for, whereby the chances that these funds will be approved are increased.
- A catalogue of the different benefits is useful.
- All methods of monetising the benefits share the view that certain biases cannot be avoided, as the surveys do not include a real transaction. Nevertheless, the workshop participants were interested in the monetisation of benefits because this would allow the comparison of river revitalisation projects with other construction projects. A useful approach could be the replacement cost approach.



---

## Thematic involvement of students

Economic aspects of urban river revitalisation were also integrated in the teaching activities in order to raise awareness and to sensitise future young professionals to this topic. Thus, three economics students focused on theoretical and practical principles of economic evaluation of urban river revitalisation in their diploma theses. Others studied the economic effects of water tourism in Leipzig after the revitalisation project was implemented and on financing options for river revitalisation in Leipzig. A diploma thesis about the development of the real estate situation along the rivers in Leipzig was prepared, but could not be conducted because the available data were inadequate for an assessment.

### 2.5.6.4 Conclusions and recommendations

#### Pilot action Thostgrundbach

It is still a matter of time before the success of the Thostgrundbach pilot action is clear. At the beginning of the planning process, many of the relevant players (even inside the city of Grimma, as well as different environmental organisations, etc.) were not open-minded about the project. In addition to the basic planning and approval procedures, innumerable explanations, individual consultations, discussions and much persuasion were needed. One of the most critical questions in the case of Thostgrundbach was, and still is, the question of property. From a today's point of view an assessment planning would be a preferable approach to realising the project goals, because under this procedure the questions of property are included. Due to the huge effort it takes to gain planning permission, the goals of the project could possibly have been reached earlier by means of assessment planning.

#### Addressing stakeholders in general

Stakeholders and stakeholder meetings can be assigned to four groups:

- the media,
- heterogeneous groups having different approaches to the project idea,
- single purpose stakeholders (group or individuals), and
- local politicians, city departments, etc.

#### The media

A general, unspecific approach to the media has almost no effect. We can distribute a lot of information to those intermediary actors but as long as it remains completely up to them what they do with our information we should not expect much.

But we can improve this situation: First we can find out who is our special audience. Who at the newspaper is responsible for writing local news? Who has this job at the local TV station, who writes in the online paper about the district where the revitalisation is taking place? Relationships with these people need to be fostered. They have to be addressed individually. They have to be thanked for reporting on the project. They have to be informed about a new development, etc. If we know the journalists personally, all the better. This increases the chance of being heard by them.

## Heterogeneous groups having different approaches to the project idea

Meetings with heterogeneous groups have the advantage that we can reach a bigger number of people at one time. This means the project information is spread easily and quickly, yet we cannot be sure the information will have a lasting effect on the stakeholders. In addition, we can hardly influence how the stakeholders will react to our presentation, how the information will be distributed or how the stakeholders will judge what we have told them and arrive at their judgement. These imponderables can be partly controlled by having an intensive discussion about the information we distributed in our meeting. But there is not always time for discussion and not every group wants to discuss.

## Single purpose stakeholders (group or individuals)

These meetings address schools, kindergartens, environmental organisations, civil society organisations, NGOs, representatives of arts and culture and social actors. The meetings may be with single persons or with small to medium-size groups. Every single group or person with a special focus should be addressed and meetings structured to individual needs. If we are well prepared, we can offer something special for each particular stakeholder that is of interest for us in a well-defined field of work. This is a precondition for good cooperation with stakeholders and good results for the project.

## Local politicians, city departments, etc.

Meetings with local politicians or members of the city administration are in some respects a subgroup of the above-described meetings with single purpose stakeholders. The most important difference seems to be that for many questions the political and administrative support is indispensable for the project's progress. Yet in this case the project aim is in the officials' own political interest and this makes the necessary cooperation more likely.

All-in-all, success in stakeholder contact depends on a triangle of three variables:

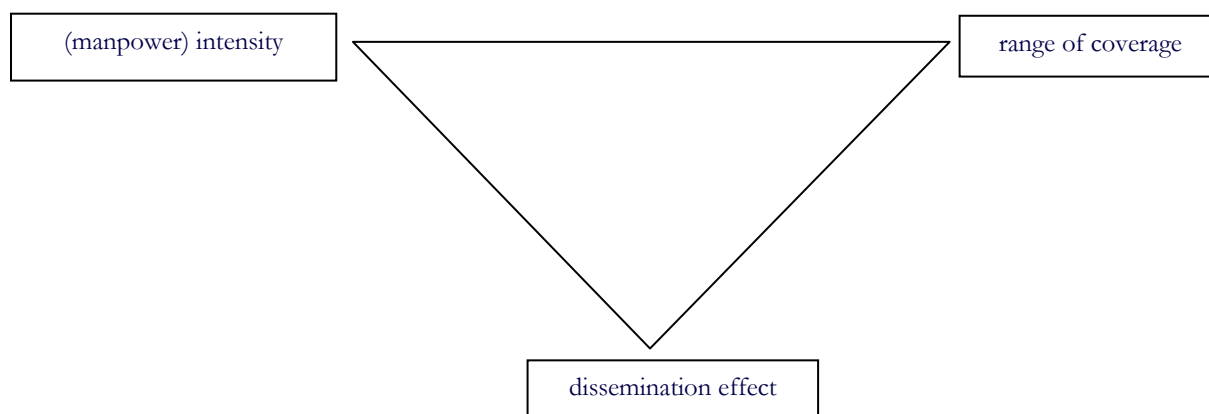


Figure 2.5-12: Triangle of stakeholder contact (© University of Leipzig).

We can reach a broad audience with comparably little input but also not very long lasting effects. Or we can have a high input of project manpower and information which reduces the range of coverage because we talk to stakeholders face-to-face but which leads to more reliable and longer lasting effects.

The main conclusion from these experiences is twofold: Participants who are involved in planning and realisation processes right from the start are most important for developing a project that considers the interests and needs of the stakeholders. In addition, stakeholder participation is a necessary precondition for sustainable acceptance of revitalisation-related measures implemented under public as well as private auspices.

## 2.5.7 Review on the experiences in the context of REURIS

In the past, many attempts at public participation have proven unsatisfactory. In all three countries, participation has for a long time been understood as simply giving the public the legally required information. As a result, public acceptance of projects often remains low because people are involved (too) late and feel poorly informed and not heard in major questions.

Since the implementation of the Aarhus Convention in 1998, awareness of the need for public participation has risen and the public has increasingly demanded involvement.

As the outcomes of urban river revitalisation processes have a direct impact on citizens, the success of a revitalisation project is strongly linked to public acceptance and support. Therefore, it is highly important to involve the public at every stage of the project and to start involvement from the beginning.

As a consequence, if revitalisation projects aim at real participation, **statutorily required public participation is not enough** because it is conducted according to formal procedures, which are limited by time and the manner of involving partners and do not go beyond the level of consultation. Furthermore, they do not provide much scope for alternative initiatives or personal contacts and often tend to discourage rather than encourage people. Commonly, affected people try to protect themselves instead of bringing forward their ideas. Therefore, all partners see the need to go beyond statutorily required forms of participation and the level of consultation and to really involve stakeholders by timely application of preventative, voluntary planning processes that focus on cooperation and co-determination.

As each project is different and has its own challenges and characteristics, there is no single appropriate method or procedure. The basis of any longer-term planning process is the **establishment of a customised communication and participation strategy** with an individual approach. As landscape planning, and in particular urban revitalisation projects are very complicated and require sectoral expert knowledge, and thus may ask too much of the average citizen, it is necessary to think about how, to which extent and at which time to involve the public. A typical communication strategy encompasses a combination of various methods at differing levels of participation in accordance with the needs of the given project and adjusted to local conditions.

Such processes are demanding in terms of time, funding and organisation and require openness, trust, an effort to find consensus and an informal approach. Participative planning processes typically operate more smoothly with a single coordinator. More complicated projects often benefit from the consulting services of an experienced, independent institution (NGO, university, firm).

The public authorities in all three countries (if executing organisation of the project) have in common that there is a willingness to foster public participation. But due to lack of staff and time, often only the legislative minimum is fulfilled. The executing office has to weigh whether or not public participation is worthwhile. Nevertheless, there are experiences in each of the partners' cities with public participation at a non-statutory level that has been implemented at the discretion of the executing office. They show that once the public is involved the projects are well accepted and get most people's support. By contrast, private investors usually are not used to or are not interested in sharing their ideas and plans or participating in a creative planning process with other stakeholders.

It became apparent that urban revitalisation projects should capitalise on good **cooperation within the executing authority**. This may be easier in small towns than in big cities with a huge administration and various departments involved. Whereas in small cities departments are under one roof and personal relationships are relatively easy to maintain, in big cities good cooperation requires special efforts to improve the flow of information, to avoid communication problems, and to follow a joint revitalisation strategy. The establishment of a coordinating department or team may be helpful.

---

Furthermore, hierarchical structures and bureaucracy within city administrations can hinder an effective planning and implementation process. The hierarchical structure of public authorities typically means that individual administrators have relatively firmly set decision-making competencies. On the one hand this makes the decision-making process easy to follow, while on the other hand it allows for little flexibility in terms of changing opinions and also little openness to communication. The hierarchy and inward focus in each department sometimes lowers the connectivity and complexity of plan assessment and the ability to coordinate planning and implementation of plans. Authorities often lack an independent management element for planning processes because of established decision-making structures, and also for organisational and financial reasons.

However, in all the partners' cities there are workgroups and round tables among administrative departments that are more or less effective in fostering urban river revitalisation projects. The staffs are willing to cooperate and to involve stakeholders, but due to lack of staff and time it is not always possible to the most preferable extent.

The **experiences with stakeholder involvement in the context of REURIS** revealed that the broad public is very open and receptive to revitalisation projects and very much appreciates being informed, involved and heard. Naturally, in projects where ecological aspects have priority the possibility of involving the broad public with low sectoral knowledge is limited due to the precedence of scientific factors. Thus, the broad public is expected to be involved in general issues whereas details can be discussed by the professionals.

Sometimes people were sceptical at the start of the project but most were convinced in the course of the planning and implementation processes by meetings and information emphasising the projects' benefits.

Most of the stakeholders were responsive, too, and were willing to cooperate and find solutions by consensus, if it was ensured that their concerns were heard and respected. Meetings helped participants to get to know each other, to build partnerships and increase the ability and the possibility to achieve agreement and then act in concert.

Needless to say, the most difficult discussions were with property owners directly affected and whose land was needed for the project. Often, intensive communication at an individual level was needed to persuade them, and sometimes every effort to get some land required for optimal revitalisation solutions failed. But all-in-all public participation proved to be a factor of success.

Furthermore, in the context of REURIS various meetings with professionals were held that helped to improve planning and implementation methods in general or accompanied the progress on the pilot actions.

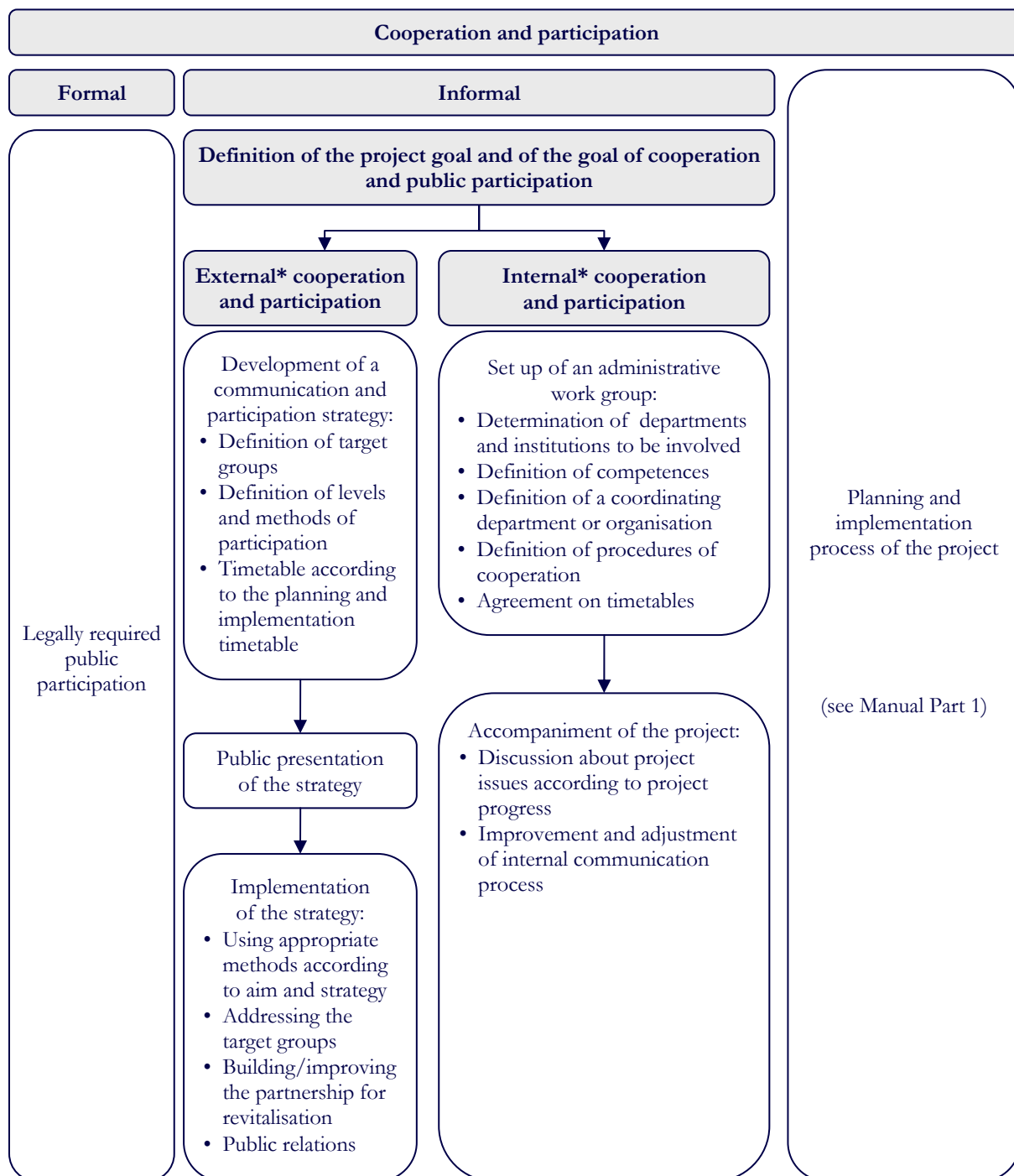
What this all amounts to is that the studies and experiences of all partners show that in most cases in which the public was involved, the projects were well accepted and received people's support. Therefore, the advantages of public participation are obvious and the REURIS team strongly recommends the strengthening and fostering of public participation and improved cooperation within city administrations.



## 2.6 Transnationally valid recommendations

Resulting from the experiences with public participation in the pilot actions, from workshops and from the study of best practices (Manual Part 1.2), the REURIS partners developed a transnationally valid scheme of cooperation and participation that can be followed in other urban river revitalisation projects, too. Furthermore, recommendations on public participation in urban river revitalisation are summarised.

### 2.6.1 Scheme of cooperation and participation



\* external: cooperation of the executing organisation with external parties; internal: within the executing organisation

Figure 2.6-1: Scheme of cooperation and participation (© REURIS project team).

## 2.6.2 Recommendations

### How to foster revitalisation projects: operative strategy

- Create an administrative work group specialising in urban river management and meeting regularly in order to foster and develop joint overall concepts for urban river spaces (operative work). Follow a joint strategy to influence decision-makers (push projects in the city council, joint press releases, exhibitions, involvement of district councils).
- Push and foster a decision in your city council whether the community commits itself to public and stakeholder involvement in general, in order to get the respective financial and personnel resources. Push and foster in your community the creation of the position of a commissioner of public participation or department of public participation.
- Look for allies from outside the administration sharing your goals in order to increase influence with decision-makers and spread the idea (multipliers).
- Set up a systematic and comprehensive communication system at a city-wide level. Establish forms of cooperation with stakeholders, non-governmental organisations and the public as well as a system of easy distribution of documents and plans and the possibility for these groups to make comments.
- Build and improve the partnership for revitalisation between the local government and other agencies involved in river valley management.
- Build and improve the partnership for revitalisation between local government and local stakeholders.

### How to implement public participation for a specific project: single project-related procedure

- Provide adequate resources (staff, financial means) for public participation. Try to include the costs of public participation measures in the first cost estimation as a necessary and regular part of the process.
- Develop a customised communication and participation strategy at the outset of the project in accordance with the needs of the given project and local conditions. Set evaluation criteria for the communication strategy implementation from the project's outset.
- Compile a framework for participation:
  - Clarify and fix the structure of participation (issues for discussion, overall control, interfaces and links, steering of the process, goals and objects, target groups, methods, timeline).
  - Establish the scope of action (legal, financial, political and technical).
  - Consider whether and to what extent decisions can be delegated to citizens (levels of participation).
- Think about your target groups and how to reach them. Consider the advantages and disadvantages of various approaches: On the one hand, you can reach a broad audience and heterogeneous groups with comparably little input and effort but also not very long-lasting effects. On the other hand, you can have a high input in project manpower and information from single-purpose stakeholders (groups or individuals), which reduces the range of coverage but which leads to more reliable and longer lasting effects. Therefore, consider the triangle of stakeholder contacts (see Figure 2.5-12).
- Start the participation process right from the start of the project. Involve external stakeholders at an early stage in order to get specific information about the local conditions, to recognise difficulties in advance and to find solutions through cooperation and, if possible, by consensus. Involve citizens not only in the planning process but also in the implementation.
- Create a working group composed of representatives of the decision-making municipal institutions and groups interested in the given area (single project-related). Regular meetings of the group foster a transparent process for pursuing the targets of the revitalisation and helps in listening to opinions and making the necessary decisions, agreements and work arrangements. Integrate existing committees, if suitable, because then participants know each other and are used to cooperating.

- 
- Use understandable language in the plan and prepare plan documents that are easy to understand. The presentation of plans and explanations has to be understandable to laymen. Try to meet high standards for quality of graphics and texts.
  - Make sure that people are aware of all aspects of the project, e.g. if technical solutions or unpopular measures are required that may not meet with the inhabitants' approval. Explain them in advance.
  - Involve the planning expert.
  - Mobilise supporters, but also integrate opponents of the project, in order to avoid destructive actions. Identify the "usual suspects" and take care to respond to their concerns. If you plan an event with the public and stakeholders, analyse in advance the conflict potential and plan how to handle it. If conflicts are deadlocked, try to split the group of opponents.
  - Identify the common goals of the various groups even if there are conflicts about how to reach the goals.

### **What to consider concerning events and meetings**

- When scheduling events and meetings, consider holidays and mega events (such as the football World Cup). Announce meetings and information events clearly and at least 14 days before the event in order to guarantee that people are aware of the event.
- Choose the location of your event, workshop, etc. carefully in order to attract people (consider the location's attractiveness and accessibility). Start early with preparations in order to find appropriate rooms. Create a comfortable atmosphere at the event location. If you hold several events, change locations in order to provide variety. Avoid holding events in the city hall, which could be too intimidating for some people.
- Smaller groups or meetings with only a few people support the involvement of shy people.
- Engage a professional moderator, especially for planning workshops and for discussion of ideas. The moderator must be familiar with the project details and potential conflicts.
- Prepare clear and understandable presentations with visualisation of the revitalisation ideas.

### **How to motivate people to participate**

- Bear in mind that it takes people's leisure time to be part of the participation process. Thus, think about how to motivate them. Point out what their concerns might be and emphasise local references.
- Show people that you appreciate their participation by giving them feedback and an explanation of how and to what extent their suggestions are being used by decision-makers. Take the minutes from events which allow you to investigate remarks, reservations and propositions from the public.
- Raise expectations among the residents (but only realistic ones) in order to motivate people and get their support.

### **How to optimise public relations**

- Use public relations techniques to support revitalisation ideas and to generate pressure on political committees. Continue with intensive project communication during planning and implementation.
- Find out who are important contacts in the local media (newspaper, TV station, online paper, etc.). Your relationships with these people need to be fostered. Address each contact individually, inform them about new developments, etc., and thank them for reporting on the project.
- Write press releases and hold press conferences. Focus on issues that are interesting for the general public such as specific projects and actions, since people are not interested in general explanations. Point out the benefits and particularities of the project.

- 
- Provide information not only on the City Hall notice board but also on billboards, information points, websites or district portals. Use various media such as print media, TV stations, the Internet, your own documentation and exhibitions. Use modern media technology: provide detailed information on the Internet and use online applications (such as surveys, voting, a moderated Internet forum, etc.). Add a website hit counter early on (to monitor the number of hits, hits during the project duration, hits on different reports, etc.).
  - Connect the project with additional activities and events such as cycle tours, boat trips, artificial exhibitions, river cleanups, etc., to popularise the project. Plan and implement an untraditional, civic and media-savvy social gathering that will enable broad distribution of information about the project.

## Further ideas

- Allow citizens to present their ideas to the city council themselves.
- Address emotions. For instance, ask people: “If the project gets realised, where will be your future favourite place?”
- Consider the involvement of a professional communications agency.
- Use the possibility of cooperating with students in order to get innovative and different approaches.
- Implement demonstration measures which help to persuade the public and decision-makers (model stretches, blooming meadows, etc.) about the value of the project.
- Combine revitalisation measures with other projects, activities or goals to make the project better accepted; for example, combine flood protection measures and measures to enhance retention capacity with revitalisation measures.
- Try to organise local stewardship for the needs of implementation.
- Elaborate, improve and show the long-term vision or plan of the river valley revitalisation.

## How to improve cooperation within and between city administrative units

- Cooperate continuously with all departments and organisations involved, appoint a coordinating department (or even an external coordinator) which leads through the whole process from the planning up to the implementation in order to guarantee the project’s continuity and be sure the initially intended goals are met.
- Establish a system of cooperation that facilitates interpersonal contact as an important additional tool of cooperation beyond the usual official circulation of documents. Encourage departments to communicate beyond the official circulation of documents, for instance by phone calls or e-mail (pro-active rather than passive cooperation).
- Establish a system for easy exchange of documents, e.g. via intranet, to improve the flow of information within the city administration.
- Clarify the competences and responsibilities between departments in advance.



## 2.7 References and further reading

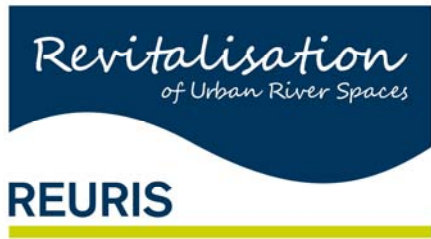
### References

- Arnstein, S. R. (1969): A Ladder of Citizen Participation. *Journal of the American Institute of Planners*, Vol. 35, No. 4, pp. 216-224.
- British Council (2008-2011): Future City Game. Available online at: [http://creativecommons.org/urban\\_co-design\\_tools/future\\_city\\_game](http://creativecommons.org/urban_co-design_tools/future_city_game), checked on 22/11/2011.
- Brożkowska A., (2010): Partnership for Ślepiotka – system of cooperation for revitalisation of Ślepiotka valley, Katowice, elaboration for the REURIS Project needs, unpublished.
- Brożkowska A., (2011): - Partnership for Ślepiotka – scenarios of Ślepiotka valley revitalisation, Katowice, elaboration for the REURIS Project needs, unpublished.
- European Commission (2003): Common Implementation Strategy for the Water Framework Directive (2000/60/EC). Guidance Document No. 8: Public Participation in Relation to the Water Framework Directive. Working group 2.9 - Public Participation, Luxembourg.
- Hansen, H. S.; Mäenpää, M. (2007): Public Participation in River Basin Planning. In: TuTech Innovation GmbH (ed.): *Baltic River Basin Management Handbook. Strategies for Sustainable River Basin Management*. Hamburg.
- IAP2 - International Association for Public Participation (2007): IAP2 Core Values of Public Participation. Available online at: <http://www.iap2.org/associations/4748/files/CoreValues.pdf>, checked on 03/01/2012.
- Owen, H. (n.d.): A brief user's guide to Open Space Technology. Available online at: [http://www.openspaceworld.com/users\\_guide.htm](http://www.openspaceworld.com/users_guide.htm), checked on 22/11/2011.
- UNECE - United Nations Economic Commission for Europe (1998): UNECE Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters, adopted on 25<sup>th</sup> June 1998 at the Fourth Ministerial Conference in the 'Environment for Europe', Aarhus.
- United Nations (1992a): Rio Declaration on Environment and Development. The United Nations Conference on Environment and Development, 3 to 14 June 1992, Rio de Janeiro.
- United Nations (1992b): Agenda 21. The United Nations Conference on Environment and Development, 3 to 14 June 1992, Rio de Janeiro.
- Wiedemann, P. M.; Femers, S. (1993): Public participation in waste management decision-making: analysis and management of conflicts. *Journal of Hazardous Materials*, Vol. 33, pp. 355-368.
- World Café (n.d.): Website of the World Café Community Foundation. Available online at: <http://www.theworldcafe.com>, checked on 22/11/2011.

---

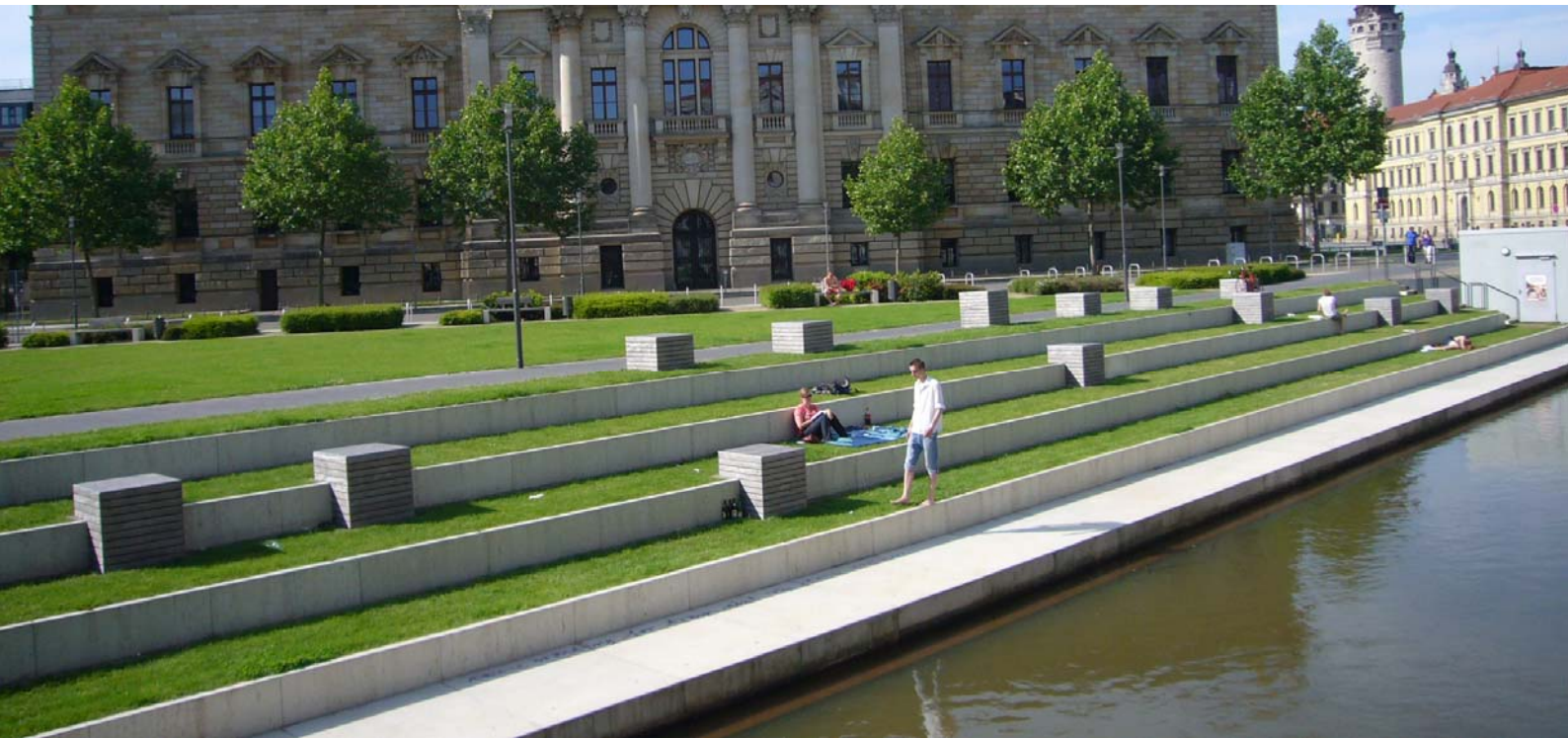
## Further reading

- BMUNR (2004): Beteiligungsrechte im Umweltschutz - Was bringt Ihnen die Aarhus-Konvention? Broschüre des Bundesministeriums für Umwelt, Naturschutz und Reaktorsicherheit, Berlin.
- Krzyżanowska, Ł.; Faciejew, Ł. (2009): Partycypacja obywatelska w Polsce. Fundacja Batorego.
- Kupczyk, P.; Trzcńska, D.: Udział społeczeństwa w podejmowaniu decyzji dotyczących środowiska.
- Program współpracy Miasta Katowice z organizacjami pozarządowymi na 2009 rok; Załącznik do Uchwały nr XXXI/663/08 Rady Miasta Katowice z dnia 27.10.2008r.
- Program współpracy Miasta Katowice z organizacjami pozarządowymi na 2010 rok; Załącznik do Uchwały nr XLVIII/985/09 Rady Miasta Katowice z dnia 26 października 2009r.
- Raport z monitoringu dostępu do informacji publicznej w gminach województwa śląskiego; Opracowanie raportu: Grzegorz Wójkowski; luty 2009.
- Współpraca Urzędu Miasta Katowice z mieszkańcami; Opracowanie raportu: Grzegorz Wójkowski; kwiecień 2008



## MANUAL PART 3

# FINANCIAL AND ECONOMIC ISSUES



## **3. MANUAL PART 3**

Part 3 of the REURIS manual focuses on financial and economic issues.

### **Structure of the REURIS Manual Part 3**

#### ***3.1 Introduction***

#### ***3.2 Financing options***

The chapter describes financing options which are available in Poland, the Czech Republic and Germany and it also identifies some gaps.

#### ***3.3 Costs and benefits of urban river revitalisation***

The chapter gives an overview of the different kinds of costs incurred during urban river revitalisation and then deals with the benefits which society gains from revitalised river spaces.

#### ***3.4 Transnationally valid recommendations***

The chapter brings together the findings and experiences by summarising recommendations concerning the financial and economic issues of urban river revitalisation.

#### ***3.5 References***

## 3.1 Introduction

Encouraged by the European Water Framework Directive which requires the achievement of a “good ecological status” for all surface water bodies, or at least a “good ecological potential” for heavily modified water bodies, by 2015 (European Parliament, 2000: 9), municipalities are trying to integrate their rivers and streams into their urban structures. Revitalisation of urban river spaces is cost-intensive. Thus, municipalities have to defend the opportunity costs associated with this need for additional funding which is then not available for the achievement of other objectives, and they have to prevent the impression from being created that river revitalisation is a dispensable kind of luxury. A considerable contribution to the effort to win public support for these projects is success in communicating the positive impacts of improving the ecological status of rivers on human well-being in an appropriate way so that their value for society becomes evident (cf. Everard, 2011). Therefore, Manual Part 3 focuses on financial and economic issues in the context of urban river revitalisation projects.



## 3.2 Financing options

### 3.2.1 Financing options in Poland

The aim of this chapter is to identify the available financing options of the river revitalisation process and to establish their potential as mechanisms supporting this process.

Planning connected with landscape protection and spatial development in cities was started in Poland after 1989. Since then, the mechanisms of funding enterprises have been established, starting with the planning phase, to carry out specific tasks.

Revitalisation projects, including river revitalisation projects, are unique, therefore, it is important to search for funding that relates to each project's particular spatial aspects (including protection of cultural heritage), as well as economic and social conditions. In Poland, the funding sources for revitalisation projects may include budgetary programmes, programmes that provide European Union funding, as well as public-private partnerships (PPP).

#### Local public financing

River revitalisation projects in Poland may be financed from funds from government units that initiate planning, such as:

- the commune level, from the commune budget,
- the county (*poviat*) level from the poviat budget,
- the regional level, from self-governing voivodeships' budgets and from the voivode's budget, and
- the central level from the budget of ministries responsible for development.

Local public financial instruments are closely connected with individual city budgets and as such, they can have a different character:

- instruments consisting of reductions and exemptions from public taxes (reducing the income into the budget), and
- instruments consisting of guarantees and subsidies from the budget (expenses from the budget).

The funding options from local public sources (commune or county budgets) will not be described in detail because many Polish communes and counties do not have a special programme or funds allocated for projects related to the revitalisation of urban river spaces. Many communes and counties in Poland place a higher priority on other projects, such as the elimination of asbestos or reducing pollution emissions, than on the funding of activities related to landscape and environmental protection.

#### External public co-financing

In addition to local public financing, which can be used or not depending on the decisions of municipal authorities or the cooperating coordinator-manager of a revitalisation programme, there are also commonly accessible instruments based on the decisions of the Polish government, international agreements or operational programmes. The following section will describe these possible funding sources with a special focus on funding mechanisms other than local public funds and the Operational Programme for revitalisation projects.

## EU Funds

Together with national financial contributions, Poland has at its disposal a total of 85.6 billion EUR for investments in between 2007 and 2013. Furthermore, with Polish membership in the European Union, the country accepted the EU's general operating frameworks for development policy, in compliance with the EU's social and economic cohesion policy. Such frames have become the basis for developing proper documents, in agreement with the EU, for establishing operating programmes and defining goals and priorities. Revitalisation programmes, as a responsibility of local governments, have been mainly financed through the **National Development Plan** implemented by the **Integrated Regional Operational Programmes** in 2004-2006 (IROP) and through the **National Strategic Reference Framework** in the period of 2007-2013. NSRF objectives are executed through programmes and projects co-financed by such structural instruments as the:

- 16 **Regional Operational Programmes** (ROP) – ERDF,
- Operational Programme **Infrastructure and Environment** (OP I&E) – ERDF and CF (Funds located here are used to carry out implementations regarding environmental and landscape protection),
- Operational Programme **Innovative Economy** (OP IE) – ERDF,
- Operational Programme **Human Capital** (OP HC) – ESF,
- Operational **Programme Development of Eastern Poland** (OP DEP) – ERDF,
- Operational Programme **Technical Assistance** (OP TA) – ERDF, and
- Operational Programmes of **European Territorial Cooperation** (OP ETC) – ERDF.

The above-mentioned operational programmes are managed at the national level, while ROPs are managed at the level of the 16 regions. For example, within the Regional Operational System for the Silesian Voivodeship during the years of 2007-2013, the self-government territorial units can apply for funding for projects for Priority 5 (environment). In addition, the funding can be obtained for the realisation of projects within Priority 6 (sustainable city development). Funding up to a maximum of 85% of the qualified investment costs can be obtained.

The sources of funding for revitalisation projects may be, as in other EU countries, the following programmes:

- the Financial Instrument for the Environment: **LIFE+**, and
- relevant transboundary funds: **INTERREG** including Central Europe and mutual cooperation, such as Poland – Czech Republic, Poland – Slovakia.

A separate description is required for the mechanism called **JESSICA**. The aim of the JESSICA Initiative is to support the development of urban areas and their economic and social revitalisation. The assumption lying behind the JESSICA financing mechanism is that a Fiduciary Fund should support the Urban Development Funds established by individual cities from their own funds, as well as from other public and private sources, and governed strictly by formal agreements. The Urban Funds invest in specific municipal projects with loans, guarantees, etc. It is assumed that projects supported by the JESSICA Initiative will generate income.

In Poland, it is possible to apply JESSICA at the regional level within the Regional Operational Programmes (ROPs). As of this time a decision to implement this initiative has been taken by the Provinces of Greater Poland, West Pomerania, and Silesia.

Within the scope of the JESSICA Initiative, European funds may be invested for example in public-private partnerships or other urban projects included in sustainable urban development plans (which includes revitalisation of city centres, districts, and urban infrastructure of unique historic value). The projects, areas, or buildings to be supported are selected by the communes responsible for developing of the local revitalisation plans.

## National Funds

The National Fund for Environmental Protection and Water Management (NFOŚiGW) and the 16 Voivodeship Funds for Environmental Protection and Water Management (WFOŚiGW) have capital at their disposal collected by Voivodeship Inspectorates for Environmental Protection. These Funds support tasks determined by the legislature and which are included on the list of the Fund's investment priorities announced every year. In the meantime there were changes concerning communal and *poviat* funds: they ceased to exist. At the moment, the legislature has not appointed successor institutions, which makes it difficult for communes and *poviats* to fund nature and landscape protection projects. Also, the structure of Voivodeship funds has changed: they have become budget units of the self-governing Voivodeships.

The **National Fund for Environmental Protection and Water Management (NFOŚiGW)** is the largest institution financing environmental protection activities in Poland. The aim of the NFOŚiGW is to give financial support to ecological investments of national, interregional and local scope and significance, which is crucial from the perspective of environmental needs.

For the year 2011, the Fund is made up of priorities on ecology including:

- Ecology policy priorities
  - support for undertakings being funded by the European Union, other sources of non-refundable foreign aid, and the National Fund for Environmental Protection and Water Management, and
  - support for undertakings leading to fulfilment of the treaty of accession requirements related to the environment and not co-financed by EU funds,
- Substantive priorities
  - Nature protection:*
    - co-financing of nature conservation,
    - support for actions concerning establishment and preservation of Natura 2000 areas, and
    - co-financing of nature compensation programmes,
  - Ecological education:*
    - co-financing of educational programmes and contests related to natural protection for children and youth, and
    - support for the activities of regional and local Centres for Ecological Education and ecological organisations in terms of execution of ecological programmes, including didactic equipment.

Furthermore, there are programmes administered by the Ministry for the Environment, such as the Flood Safety Programme for the Middle Vistula River Basin, which rely on the coordinated actions of national and local authorities. This particular programme is carried out with the involvement of all institutions responsible for flood security, as well as governors and marshals from all the provinces within the Middle Vistula River Basin (the Provinces of Lublin, Subcarpathia, Kuyavian-Pomeranian, Podlasie, Warmia-Masuria, and Łódź).

## Voivodeship Funds

In Katowice, for example, the **Voivodeship Fund for Environmental Protection and Water Management (WFOŚiGW)** gives financial support for realisation of environmental protection and water management activities compliant with the National Ecology Policy, the Development Strategy for the Silesian Voivodeship, as well as Poland's international obligations and valid legal regulations. The Voivodeship fund usually co-funds investment activities in an amount no higher than 50% of documented realisation costs. The fundamental form of WFOŚiGW activity is the giving of loans with preferential interest rates and payment options as well as some subsidies in the form of grants.

## Others

Two important sources of funding for objectives connected with the environment and landscape protection are the **European Economic Area Financial Mechanism** and **Norway Grants**. The resources are donated by the three EFTA (European Free Trade Association) countries Norway, Iceland and Liechtenstein which form, along with the European Union, the European Economic Area. In Poland, the programme is managed by the Ministry for the Environment with the aid of the National Fund for Environmental Protection and Water Management. For the co-financing of river revitalisation projects, funding is possible under the programme area “Biodiversity and ecosystem services”, which offers support for projects resulting in, among other things:

- increased potential of native ecosystems against invasive alien species, and
- increased awareness of and education about biodiversity and ecosystem services, including the linkage between biodiversity and climate change, and economic valuation of ecosystems.

Another programme operating in a similar way is the **Swiss-Polish Cooperation Programme**. Starting in 2008, Switzerland has taken part in several projects designed to reduce economic and social disparities in an enlarged EU. These funds provide support for public and private sector institutions, as well as non-governmental organisations, for projects mainly related to the environment, health and education. Under the programme’s Priority of Environment and Infrastructure funding is available for the following activities:

- rehabilitation, modernisation, and extension of environmental infrastructure, and
- biodiversity, protection of ecosystems and support for cross-border environmental initiatives.

This programme (within the Priority Area of the Private Sector) may also provide support for enterprises (SMEs) willing to invest in the infrastructure of a revitalised area.

Until the end of May 2011, another fund of this kind was the **EcoFund**. It was established to finance enterprises connected with environmental protection which are not only significant on the regional or national scale, but also influence achieving environmental goals which are considered a priority by the international community on the European and even global scale. The task of the Fund was to facilitate the transfer of best technologies from the donor countries to the Polish market, and thus stimulate the development of the Polish environmental protection industry. The EcoFund Foundation was a non-returnable foreign aid fund referred to as “debt-for-environment swap funds.” The money was donated to Poland based on the Agreement on the Reduction and Rearrangement of the Debts of the Republic of Poland concluded in Paris on 21 April 1991. Six countries, namely the USA, France, Switzerland, Italy, Sweden, and Norway, participated in the debt-for-environment swap program. The co-funding of enterprises whose only aim is solving local problems was not possible under the EcoFund.

## Private co-financing

Private investment in revitalising watercourses is not a standard practice in Poland. Of course, the fundamental rule of funding a revitalisation programme should be participation of owners and tenants in the costs connected with construction and renovation activities carried out within the revitalisation programme. But in reality, there is only a limited possibility for private financing and support from potential investors. They are unfortunately rarely made with success, especially in cases of big projects.

## Public-private partnership

Public-private partnership (PPP) is a form sanctioned by Polish law of cooperation between private enterprises supported by private capital and the public sector at all levels. This instrument for developing infrastructure and using it to offer the public economically useful services allows for investment in the public sector in most countries around the world. PPP is currently one of the most discussed solutions in

terms of investments by public entities. It is becoming a promising form of cooperation between public authorities and the private sector, allowing for increased effectiveness in provision of public services due to risk distribution and utilisation of private sector experience. Partnerships may also provide additional sources of capital, thus freeing public funds for other needs. Simultaneously, the private investors benefit from the security of long-term cash flows from public sources. PPP is open to all areas and experiences of the private partner as long as they are related to management of an asset utilised to carry out a mutual undertaking. Due to the character of public entities, any PPP is subject to the obligations put upon the public entity by act of parliament, and the public entity may become involved in the partnership only to the extent of its authority. The importance of this approach to carrying out public investments was stressed in the Communication from the Commission on Mobilising private and public investment on 19 November 2009. The Communication indicates that in view of the current financial and economic crisis, public-private partnerships may be effective means to deliver infrastructure projects, to provide public services and to implement wider innovations. Currently, it is possible to obtain support from EU funds for investment projects for up to even 85% of the qualified cost.

## Summary

The aim of this chapter was to identify the available financing options for urban river revitalisation or other revitalisation projects in Poland.

Revitalisation projects, including river revitalisation projects, are unique, therefore, it is important to search for funding that relates to each project's particular spatial aspects (including protection of cultural heritage), as well as economic and social conditions. Article 47 of the Commission Regulation No. 1828/2006 states that revitalisation involves creating conditions for development in all three aspects within the crisis area. According to this regulation, the revitalised area must meet at least three criteria from a list of objectives, and at least two of the three must pertain to the social and economic aspects of the project. In Poland, funding for revitalisation projects may be pursued among the following sources:

- budgetary programmes:
  - national, regional, and local programmes, such as the National and Regional Fund for Environmental Protection and Water Management (NFOŚiGW and WFOŚiGW), and
  - programmes of the Ministry of the Environment, such as the Flood Security Programme for the Middle Vistula River Basin
- programmes with access to European Union funding:
  - Innovative Economy Operational Programme (OP IE),
  - Human Capital Operational Programme (OP HC),
  - Infrastructure and Environment Operational Programme (OP I&E), and
  - Regional Operational Programme (ROP).
- other aid funds:
  - European Economic Area Financial Mechanism and Norway Grants,
  - Swiss-Polish Cooperation Programme, and
  - EcoFund (until May 2011)
- additional funding sources with mechanisms such as:
  - JESSICA, and
  - public-private partnerships (PPP).

However, currently available programmes are not able to finance very large revitalisation projects, since such allocations have already been exhausted for the 2007-2013 budgetary period, and strategic documents for the 2014-2020 timeframe are still under development. Thus, there is a need to look elsewhere for funding sources, taking into account the variety of revitalisation efforts currently underway, and new funding mechanisms such as JESSICA or public-private partnerships, which may provide low interest loans rather than non-returnable subsidies.



Financial instruments play different roles in the revitalisation process. On the one hand, they should be treated as a means of obtaining funds for carrying out activities planned in the revitalisation process. On the other hand, they should also be treated as a way to encourage local residents and economic interests to initiate revitalisation processes that can help achieve environmental and social benefits at all levels. Because there is a lack of revitalisation policy at the national level, policy is usually formally formulated at the regional and local levels and is often made possible only by the influx of EU resources.

Funding for revitalisation actions can also be used to help pay for regional tourism promotion, capital support for economic undertakings (including support for micro, small, and medium enterprises), protection of the natural environment, support for social initiatives, especially for non-government organisations active within the investment area and its buffer zone, elimination of architectural barriers, protection of historic monuments, and finally initiatives aimed at broadening the cultural offer of the city.

---

## 3.2.2 Financing options in the Czech Republic

This chapter describes financing options in the Czech Republic, focusing on the cities of Pilsen and Brno.

### Local public financing

Financing the revitalisation of watercourses from municipal budgets depends mainly on the availability of funds. Municipalities prefer projects aimed at flood control and protection systems. Because these projects can be financed from national or European resources, cities spend their funds mainly on co-financing these projects.

#### City of Pilsen

The City of Pilsen has a list of flood control and protection measures that are a priority for municipal budget financing. In addition, a strategic document entitled 'Pilsen Development Programme' exists in which an updated implementation plan is prepared each year and which lists projects financed from the city budget.

**The Environment Fund** is a special-purpose fund set up by the City of Pilsen as a supporting financial resource to help create and maintain a healthy environment and clean city. This fund is an environmental protection tool under Section 33 of Act No. 17/1992 Coll., on the environment, and is an integral part of the city's assets.

#### City of Brno

The City of Brno has a current flood protection plan, which has been elaborated by the Department of Water and Forest Economy and Agriculture of the Brno city council, and which has been officially consistent with the flood protection plan for the South-Moravian Region since June 2008. Otherwise, the city council's Department of Environment oversees these issues.

There is potential for PPP projects in Brno, thanks to the connection of the surroundings of the Ponávka River with build-up areas of the city. This area has a potential to attract private investors from the tourism point of view and to be financed by PPP (e.g. marketing and information campaigns).

### External public co-financing

#### EU Funds

**Environment Operational Programme:** As part of this operational programme it is possible to finance projects that limit flood risks by eliminating water level discharge through a system of close-to-nature flood control and protection measures. It is possible to finance project preparations and subsequent implementation of the investment from this programme. Another area of support is related to optimising the landscape water regime, which aims to correct watercourses that were poorly adapted in the past, unsuitable drainage and other impacts that influence the water regime in the landscape, increasing the landscape's retention capabilities and reducing the negative influences of water erosion and drought. This involves the implementation of measures which are positive for the landscape and ecosystem diversity, leading to an increase in the landscape's retention capabilities, the protection and renewal of natural drainage levels, and the prevention of high-risk situations, particularly flooding. Support for creating and renewing close-to-nature greenery in settled areas by regenerating the urban landscape is also possible.

**Cross-border cooperation between the Czech Republic and Bavaria:** The Priority Axis for economic development, human resources and networks supports cross-border cooperation in, for example, setting up and improving the quality of tourist facilities, cycling routes and paths, horseback riding paths and theme-based and educational paths, and creating information and promotional materials and information centres. The Priority Axis for landscape and environmental development supports projects in areas such as species and biotope protection, flood control and protection measures, and the conversion of unused land back into land suitable for agricultural use.

In Pilsen, funding can be drawn from **ROP NUTS II Southwest** only for support in the tourism sector. As part of this operational programme, Pilsen is attempting to receive finances for sports and recreational trails enhanced with sports centres and the necessary outdoor furniture in river valleys (greenways).

In Brno, financing the creation of new pathways for pedestrians and cyclists is possible from the **ROP NUTS II Southeast**, as the mentioned objectives are involved in two priorities and are supported in the following support areas:

- priority 1, support area 1.4 and  
*Development of infrastructure for non-motorised traffic, because part of the investments in non-motorised traffic development will include construction and reconstruction of paths for cyclists in the form of maintained trails and sign-posted roads, which are intended for cyclists, skaters, scooters and pedestrians. Automobile and motorcycle traffic is excluded from such roads.*
- priority 2, support area 2.1  
*Development of infrastructure for tourism, because the supported activities focus mainly on construction or modernisation of infrastructure connected with tourist theme products in the region, for which one of the priorities is construction and technical improvements of tourist trails and pathways for pedestrians, and educational paths including supplementary facilities. Within the framework of this support area, it is possible to finance Objective 2 of the pilot project, namely creation of high-quality concourses with city greenery in connection with streams.*

**LIFE+:** The Financial Instrument for the Environment entered into force with the publication of the Regulation in the Official Journal L149 of 9 June 2007. It consists of the following components:

- Nature & Biodiversity,  
*The Nature & Biodiversity component continues and extends the former LIFE Nature programme. It will co-finance best practice or demonstration projects that contribute to the implementation of the Birds and Habitats Directives and the Natura 2000 network. In addition, it will co-finance innovative or demonstration projects that contribute to the implementation of the objectives of the Commission Communication (COM [2006] 216 final) on “Halting the loss of biodiversity by 2010 – and beyond”. At least 50% of the LIFE+ budget for project co-financing must be dedicated to LIFE+ Nature and Biodiversity projects.*
- Environment Policy & Governance, and  
*The Environment Policy & Governance component continues and extends the former LIFE Environment programme. It will co-finance innovative or pilot projects that contribute to the implementation of European environmental policy and the development of innovative policy ideas, technologies, methods and instruments. It will also help monitor pressures (including the long-term monitoring of forests and environmental interactions) on the natural environment.*
- Information & Communication.  
*This new component will co-finance projects relating to communication and awareness-raising campaigns on environmental, nature protection or biodiversity conservation issues, as well as projects related to forest fire prevention (awareness raising, special training).*

## State funding

**Povodí**, a state enterprise, is the administrator of watercourses and can be a potential applicant for a subsidy from the Ministry of the Environment or the EU. Povodí supports flood prevention investments and is responsible for caring for watercourse beds, including but not limited to maintaining watercourse beds in a condition that secures sufficient flow capacities when water is diverted from the territory while keeping water depth as close to natural conditions as possible. The enterprise maintains embankment vegetation on land occupied by or next to watercourse beds so that this vegetation does not become a

barrier to water drainage in case of flooding. In addition, Povodí operates and keeps in working order hydraulic structures in watercourse beds which are essential for securing the function of the watercourse or which predominantly serve the watercourse and which are owned by the watercourse administrator or, if applicable, which the administrator uses for another reason relating to the law.

**The Ministry of the Environment** presently does not provide subsidies at the national level. The Restoration of Natural Landscape Functions programme has been prepared for the future. This is a national subsidy title supporting investment and non-investment objectives that implement adaptation measures reducing the impacts of climate change on aquatic, forest and non-forest ecosystems. The Ministry makes it possible for the Agency for Nature Conservation and Landscape Protection of the Czech Republic and national park administrators to implement measures stemming from plans for the care of specially protected areas, from the summary of recommended measures for avian territories, rescue programmes and programmes for specially protected types of flora and fauna. Not least of all, the Ministry finances monitoring and documentation. After project financing is completed as part of the operational programmes, the Restoration of Natural Landscape Functions programme should take over the function of the Operational Programme Environment.

**The Ministry of Agriculture** administers a subsidy called Support for Flood Prevention II. The main objective of the programme is to further reduce the level of danger and flood risks in watercourse flood zones. The programme is particularly focused on implementing those measures that address flood hazards in the highest risk areas along the country's waterways. It objectively prioritises those high-risk areas where flood control and protection measures will have the greatest impact. Measures (actions) on minor watercourses that help to positively influence drainage in the upper sections of the watercourse and measures for managing extreme flood situations on major watercourses are appropriately added as part of the programme.

**The State Transportation Infrastructure Fund** provides a financial contribution for constructing and maintaining cycling paths or combined divided or undivided paths for pedestrians and cyclists.

## Regional funding

Unfortunately, **the Pilsen Region** does not presently have any subsidy programmes focused on the revitalisation of watercourses in the urban landscape. The Pilsen Region is the administrator of a Territorial System of Ecological Stability (*ÚSES*) of regional importance.

## Private co-financing

Private investment in the revitalisation of watercourses is not standard practice in the Czech Republic. In a case such as the creation of good-quality concourses with city greenery in connection with a stream and creation of pathways for pedestrians and cyclists (new traffic infrastructure supporting access to the area), private financing and support is conceivable. It is possible to contact potential investors and try to drum up interest. However, due to the current financial crisis, receiving financing from private sources is improbable.

## Public-private partnership

In 2006, a law on license agreements and licence proceedings was approved in the Czech Republic. This law governs in detail the opportunities offered by PPP for development projects.

In the Czech Republic, this form of project financing is in its infancy and at present no other project of this type has been completed in the Czech Republic. This type of financing has not yet been used to finance the revitalisation of watercourses.

## Summary

In the Czech Republic, funding from European Union structural funds is the main source of financing. It is clear that the potentially most significant financial support could be given within the framework of the Operation Programme Environment, in cases where the objective is near-natural modification of the stream channel and banks. Also, private sources of financing can play a role in co-financing, although this method has so far been rare. Once the European Programmes are no longer available, funding is expected from national sources, especially support from the Ministry of Environment for revitalisation.



---

### 3.2.3 Financing options in Germany

This chapter focuses on nationally available financing options, but, due to the origin of the German partners involved in the REURIS project, also on regional particularities in the States (*Länder*) of Baden-Württemberg and Saxony.

#### Local public financing

The different kinds of public financing highlighted in this part are municipal self-financing, municipal grant programmes, and the use of compensating payments from the impact regulation of the Federal Nature Conservation Act and the Federal Building Code.

The most obvious way to finance the revitalisation of urban river spaces is **municipal self-financing**. However, with regard to the financial restrictions characterising most municipal budgets, this option is often used for the most urgent river revitalisation projects only. For all other projects, municipalities usually seek other options in order to reduce their own financial contribution. Therefore, it is not surprising that, according to the knowledge of the authors, there are no special **municipal grant programmes** for the revitalisation of urban river spaces.

One financing option from which river revitalisation projects can benefit is compensation available from the impact regulation of the Federal Nature Conservation Act (*Bundesnaturschutzgesetz*) and the Federal Building Code (*Baugesetzbuch*). According to these regulations, all considerable impairment in nature and landscapes, which cannot be avoided, shall be compensated for either by nature and landscape conservation measures or, if this is not possible, by compensating payments. These payments shall amount to the average costs of the non-feasible compensating measures including the necessary average costs of their planning and maintenance as well as for land acquisition including staff and administrative costs. If these costs cannot be identified, the amount of the compensating payments is calculated according to the duration and gravity of the intervention with consideration of the benefits which result from the intervention for the intervener. The compensating payments are committed to measures for nature protection and landscape management for which there is no prior legal obligation by any other regulation. The measures shall be implemented preferably in the affected area. Because these can include river revitalisation measures, this regulation may be a good source of support for financing such projects. For cases in which the intervener is a private investor, this financing option could also be classified as private co-financing.

#### External public co-financing

The models of public co-financing described in this part are distinguished by funding level: EU, Federal Government, and the States (*Länder*) of Baden-Württemberg and Saxony. All these models have the common principle that they do not provide complete funding for river revitalisation projects but only a certain percentage.

#### EU Funds

Two exemplary selected models co-financed at the EU level, which are relevant for urban river revitalisation projects, are the Interreg and LIFE+ programmes.

**Interreg** belongs to the EU regional policy objective “European territorial cooperation” and is co-financed by the European Regional Development Fund (ERDF). It supports cross-border, transnational, and interregional cooperation. The percentage of co-financing and further conditions for project support depends on the different sub-programmes. Checking further information is worthwhile for project

initiators who are interested in implementing special river revitalisation measures as a pilot action within the framework of international cooperation such as the REURIS project.

**LIFE+** is the name of the actual programming period from 2007 to 2013 for the EU's funding instrument for the environment, the LIFE programme. During the programming period, one call for project proposals is launched by the European Commission each year in the three categories of Nature and Biodiversity, Environment Policy and Government, and Information and Communication.

## Federal Government and State-level Programmes

The Federal Government does not only support the revitalisation of federal waterways, for which it is responsible anyway, but also other river revitalisation projects, if they meet the conditions of the relevant programmes launched in cooperation with the states (*Länder*).

First, the Federal Government is responsible for federal waterways like the Neckar River. Therefore, in the context of remediation and extension measures, revitalisation projects are being realised **in cooperation with adjacent municipalities and the Federal Water and Shipping Authority**.

One programme launched together by the Federal Government and the states (*Länder*), which is relevant for urban river revitalisation projects, is called **Protection of Urban Architectural Heritage** (*Städtebaulicher Denkmalschutz*). The framework of this programme is regulated by an administrative agreement whereas the detailed conditions are determined individually by the states (*Länder*). Combined federal and state funding for revitalisation measures in urban areas is used to protect vulnerable buildings and structures that are of special historical importance.

If urban river revitalisation projects are part of a larger redevelopment project they may benefit from a special **aid programme for urban development measures** by the Federal Government and the states (*Länder*) called *Bund-Länder-Programm Städtebauliche Sanierungs- und Entwicklungsmaßnahmen*. This aid programme is limited to formally designated redevelopment areas.

Another programme launched in close cooperation between the Federal Government and the states (*Länder*) is the **Joint Task "For the Improvement of the Regional Economic Structure"** (*Gemeinschaftsaufgabe "Verbesserung der regionalen Wirtschaftsstruktur"*). This programme is limited to structurally weak regions. Hence, it is applicable in all of Saxony, but not in Baden-Württemberg. In Saxony, it focuses on economically important infrastructure measures under which urban river revitalisation projects can be funded, if the projects can be demonstrated to be necessary for economic development. For example, such projects can be an important driver for the local tourism sector.

The last financing option of this section also has a limited area of application. Funding from the **Brown Coal Agreement** is relevant only for the states (*Länder*) of Brandenburg, Saxony-Anhalt and Saxony. The agreement between the Federal Government and the respective states regulates funding for restoration measures which have become necessary in consequence of the closure of numerous open-cast mining sites since the 1990s. Funding is provided by the Federal Government and also by the states (*Länder*). Currently, the fourth Brown Coal Agreement is in force from 2008 to 2012.

## Subsidies from Federal States

It is a good occasion to implement urban river revitalisation measures when municipalities have the chance to organise a **state horticultural show** (*Landesgartenschau*) or a **green project** (*Grünprojekt*), because then the state may subsidise the construction of permanent installations. The State of Baden-Württemberg pays up to 50% or 3.835 million EUR for state horticultural shows and up to 1.278 million Euro for green projects. The State of Saxony is currently paying up to 50% or 4.5 million Euro for the next state horticultural show in 2012.

In Saxony, as well as in Baden-Württemberg, there exists a foundation regulated by public law which has a funding focus on nature protection. In Baden-Württemberg it is the **Foundation Nature Conservation Fund** (*Stiftung Naturschutzfonds*). Its revenues originate, among other sources, from the private lottery “Glücksspirale” and from mitigation charges required by the impact regulation described above. It subsidises selected nature conservation projects with innovative approaches and model character. A similar equivalent is the Saxon **Regional Conservation Foundation** (*Sächsische Landesstiftung Natur und Umwelt*). Its main promotional fund is the Saxon Conservation Fund, which supports nature protection measures and activities to increase environmental consciousness. Also for this fund, the compensating payments, described above, are one of the main sources of finance.

Saxony, as well as Baden-Württemberg, provides subsidies to projects aiming at the development of near-natural water bodies through different funding guidelines.

In Baden-Württemberg, the **Funding Guideline Water Management** outlines the following details: Under specific preconditions subsidies are granted for the expansion of water bodies, flood protection, near-natural development, riparian strips, and for water body development concepts and planning costs. The amount of funding depends on the category of the activity and the costs per inhabitant, and can contribute up to 70% of the costs.

The **Landscape Management Guideline** (*Landschaftspflegeleitlinie*) of Baden-Württemberg outlines the preconditions and shares of subsidies within areas significant for nature and landscape conservation. Subsidies are granted for sustainable land use or maintenance measures, measures related to species and habitat protection, and for land acquisition.

The State of Saxony defines the conditions under which it subsidises projects aiming at the improvement of the status or the potential of water bodies and at preventive flood protection in the **Funding Guideline Water Bodies / Flood Protection**. The subsidy rate for these measures amounts to up to 75% of project costs.

In addition to these subsidies, there is one special mechanism of support provided by the State of Baden-Württemberg. The **Initiative “Our Neckar”** (*“Unser Neckar”*) brings together actors dealing with revitalisation projects along the Neckar River. The state provides subsidies to selected projects of up to 50%, if the municipality contributes at least the same percentage.

## Others

In the region of Stuttgart, communities can apply for funding from **Verband Region Stuttgart (VRS)**, the political level of the Stuttgart Region. The VRS has drawn up the “Greater Stuttgart Landscape Park” concept (*Landschaftspark Region Stuttgart*), aimed at creating a network of open spaces and ecologically valuable green areas combined with towns and landscapes. The VRS invests in selected projects at a share of up to 50%, if the municipality contributes at least the same percentage.

## Private co-financing

In Germany, private funding for the revitalisation of urban river spaces is in large part provided by foundations. Some of them are presented in the first part of this section. Another private financing option is the financial participation of riparian owners which is described in the second part of this section.

In general, **foundations** cannot provide enough funding for whole river revitalisation projects, but their support can be very helpful for partially financing projects and for ensuring the co-financing required for eligibility in national or European support programmes. There are three foundations with a nationwide focal point of support, which also includes the revitalisation of urban river spaces and one foundation only operating in different states (*Länder*).

The **Allianz Environmental Foundation** (*Allianz Umweltstiftung*) provides funding for projects which aim at the improvement of environmental quality while at the same time considering human needs. According to this basic principle, its funding areas are protection of nature, species and landscapes, vital water spaces, urban green spaces, art of garden design, and environmental communication. The foundation only operates in Germany.

The **Vattenfall Europe Environmental Foundation** (*Vattenfall Europe Umweltstiftung*) focuses its funding on nature conservation activities in water spaces and in urban areas as well as on environmental education. It supports projects which are located in regions where the founder, Vattenfall Europe AG, is operating, that means in the agglomeration of Hamburg and the states (*Länder*) of Brandenburg, Saxony-Anhalt and Saxony.

The **Michael Otto Foundation** (*Michael Otto Stiftung*) provides funding for projects which serve the protection and conservation of water bodies and wetlands, focusing on protection and sustainable management of rivers and streams. In a special category, the foundation supports projects implemented by children and young people such as adopt-a-stream projects. Besides Germany, it also operates in Eastern Europe as well as in Northern and Central Asia.

As one of the largest environmental foundations worldwide, the **German Environmental Foundation** (*Deutsche Bundesstiftung Umwelt*) supports projects in the fields of environmental technology, environmental research and nature conservation as well as environmental communication and protection of cultural assets. The foundation also operates in Eastern European countries. There, the focus is on environmental education and communication as this field is the basis for the other two funding areas. Although the foundation was established by the Federal Government, it is mentioned in this section about private co-financing because it is allowed to accept donations and endowment contributions.

Besides the support of the larger foundations, it is also helpful for municipalities to cooperate with local **community foundations** because these local foundations can acquire financial support in ways that municipalities cannot.

According to the Water Act of Baden-Württemberg and Saxony, municipalities have the right to **involve riparian owners and other benefiting property owners as well as holders of water utilisation rights** in financing river revitalisation projects. The amount of the financial contribution is defined according to the respective benefits which result from the revitalisation. In Leipzig, there are experiences in using this possibility whereas in Stuttgart, this right has not yet been applied.

For urban river revitalisation projects which are part of larger redevelopment projects it is also relevant to mention that, according to the Federal Building Code, owners of property **within formally designated redevelopment areas** have to make an **adjustment payment** to the municipality corresponding to the rise in the land value of the property caused by the redevelopment.

Finally, it is possible that riparian owners or other interested stakeholders may contribute **voluntary payments** such as donations. This financing option should not be neglected, but it is very difficult to obtain, as it requires excellent public relations.

## Public-private partnership

According to the knowledge of the authors, as of this time there are no experiences in using public-private partnerships for financing river revitalisation projects in Germany.

---

## Summary

This chapter focuses on financing options for the revitalisation of urban river spaces which are available throughout Germany, but, according to the origin of the German partners involved in the REURIS project, also on regional particularities in the states (*Länder*) of Baden-Württemberg and Saxony. The analysed financing options are divided into local public financing, external public co-financing, private co-financing and public-private partnership.

Local public financing consists of municipal self-financing and the use of compensating payments from the impact regulation of the Federal Nature Conservation Act and the Federal Building Code. According to the knowledge of the authors, there are no special municipal grant programmes for the revitalisation of urban river spaces.

External public co-financing described in this chapter is distinguished according to the funding level: EU, Federal Government, and the States of Baden-Württemberg and Saxony. All the models have the common principle that they do not provide complete funding for river revitalisation projects but cover only a certain percentage of total costs.

Relevant models of co-financing on the EU level are Interreg and LIFE+.

The Federal Government supports not only the revitalisation of federal waterways, for which it is responsible anyway, but also other river revitalisation projects, if they meet the conditions of the relevant programmes launched in cooperation with the states.

The states may subsidise urban river revitalisation measures when they are implemented within the framework of a state horticultural show (*Landesgartenschau*) or a green project (*Grünprojekt*). Furthermore, in Saxony, as well as in Baden-Württemberg, there exists a foundation regulated by public law which has a funding focus on nature protection. In addition, both states provide subsidies to projects aimed at developing near-natural water bodies through different funding guidelines.

Finally, in the region of Stuttgart, there exists another financing option in addition to the above-named categories. There, municipalities can apply for funding from Verband Region Stuttgart (VRS), the political level of the Stuttgart Region.

Private co-financing for the revitalisation of urban river spaces is in large part provided by foundations. Another private financing option is the financial participation of riparian owners based on the Water Act of Baden-Württemberg and Saxony. In Leipzig, there are experiences in using this possibility whereas in Stuttgart, this right has not yet been applied.

With regard to public-private partnership it can be said that, according to the knowledge of the authors, there are as of yet no experiences in using this option for financing river revitalisation projects in Germany.



## 3.2.4 Review on the financing options in Poland, the Czech Republic and Germany

This part compares the experiences in the partners' countries.

### Local public financing

The most obvious way to finance urban river revitalisation projects is for the responsible governing authority to provide enough funding on its own. Czech municipalities have environmental protection tools such as the Environmental Fund in Pilsen. In Poland and in Germany, there are no special municipal grant programmes, but in Germany, urban river revitalisation projects can benefit from the impact regulation of the Federal Nature Conservation Act and the Federal Building Code which allows municipalities to finance such projects from compensation payments for considerable impairment of nature and landscape.

Urban river revitalisation projects are mostly very cost-intensive and municipal budgets are often limited to such an extent that individual cities are not able to afford implementation without any financial support from external sources.

### External public co-financing

The three national studies presented here underline the importance of public co-financing from external aid programmes as the most important financing option for the revitalisation of urban river spaces. External public co-financing exists at the EU, national and regional levels.

There are different EU support programmes which can be relevant for urban river revitalisation projects. Each of the national chapters mentioned Interreg, which belongs to the EU regional policy objective "European territorial cooperation", and which is funded by the European Regional Development Fund. In general, the availability of EU support programmes depends on the region where the revitalisation project is located, and on whether the aims of the project conform to the objectives of the funding programme. The conditions change every seven years.

Furthermore, the Polish chapter mentioned the JESSICA Initiative, which allows EU Member States to use EU grants from structural funds for urban development projects as revolving instruments by establishing urban development funds.

The three national studies mention different national support programmes. In Poland, there exists the National Fund for Environmental Protection and Water Management (NFOŚiGW), as well as programmes by the Ministry for the Environment, such as the Flood Safety Programme for the Middle Vistula River Basin. In the Czech Republic, the Povodí state enterprise supports investments in the field of flood protection and river revitalisation, and it can be an applicant for subsidies from the Ministry of the Environment or from the EU. In addition, the Ministry of the Environment is preparing a future programme for the Restoration of Natural Landscape Functions. Support for flood prevention is also provided by the Ministry of Agriculture's financial aid for pedestrian paths and cycle tracks along rivers which can be granted by the State Transportation Infrastructure Fund. In Germany, the Federal Government supports the revitalisation of federal waterways, because it is responsible for them, and it has launched different programmes in cooperation with the federal states which can be relevant for urban river revitalisation projects. Some of these programmes, like the Programme for the Protection of Urban Architectural Heritage, are available everywhere in Germany. Others, like the Aid Programme for Urban Development Measures, the Joint Task "For the Improvement of the Regional Economic Structure" and the Brown Coal Agreement, are limited to special regions.

In the Czech chapter, no special support programmes are mentioned, but in Poland and Germany public co-financing exists also at the level of voivodeships and federal states, respectively. In Poland, there is the Voivodeship Fund for Environmental Protection and Water Management Funds. In Germany, different subsidies provided by federal states can be received. For example, it is a good occasion for municipalities to revitalise rivers within the framework of state horticultural shows or green projects because special subsidies are available. Furthermore, in different federal states, there exist foundations regulated by public law with a funding focus on nature protection and also relevant funding guidelines like the Funding Guideline Water Management and the Landscape Management Guideline in Baden-Württemberg and the Funding Guideline Water Bodies / Flood Protection in Saxony. Sometimes there are also state initiatives like the Initiative “Our Neckar” in Baden-Württemberg.

Besides these support programmes, there are other possibilities of external public co-financing. In Poland, aid funds such as the Swiss-Polish Cooperation Programme and the European Economic Area Financial Mechanism, play a major role. In the German chapter, the importance of regional associations such as the Verband Region Stuttgart (VRS) is stated.

The numerous best practice examples in chapter 1.2 underline the project partners’ experiences, according to which there are no urban river revitalisation projects known in Central Europe which were financed solely by the responsible governing authority. This result underlines the importance of public co-financing at the regional, national and EU levels.

## Private co-financing

The use of private co-financing is not standard in the partners’ countries. Therefore, in the Polish and the Czech chapters no examples are presented.

In Germany, municipalities have the right to involve property owners and holders of water utilisation rights in financing river revitalisation projects. While this right has already been exercised in Leipzig, as of yet there are no experiences in using this possibility in Stuttgart. One special case in Germany, which should be mentioned, is that in formally designated redevelopment areas property owners are required to make an adjustment payment to the municipality corresponding to the rise in the value of the property caused by the redevelopment.

Furthermore, in Germany foundations provide important financial aid and support in implementing ideas. Their assistance is helpful, as their financial aid can serve as co-financing required for eligibility for national or European support programmes, in those instances where municipalities have difficulties providing their own co-financing. It may be interesting to know that some of the German foundations, such as the German Environmental Foundation and the Michael Otto Foundation, are operating in Eastern European countries. Whether a foundation will give financial support for river revitalisation projects depends on its funding areas and goals.

Another chance for urban river revitalisation projects is financial support by voluntary payments such as donations. Such contributions do not often occur, but there are examples in Germany.

## Public-private partnerships

In none of the three national studies there are examples of public-private partnerships for financing urban river revitalisation projects. On the one hand, it may be difficult to communicate why private investors should invest in a public good which cannot be traded in markets. On the other hand, municipalities also have reservations about public-private partnerships which have to be overcome before this financing option can be applied. For example, a workshop at the University of Leipzig (see also chapter 2.5.6) showed that municipalities fear a loss of rights and decision-making power when getting involved in a public-private partnership.

## Summary

Table 3.2-1 summarises the above-described findings of the three national studies.

Table 3.2-1: Summary of the financing options in Poland, the Czech Republic and Germany (© REURIS project team).

	Poland	Czech Republic	Germany
<b>Local public financing</b>	<ul style="list-style-type: none"> <li>Municipality or county (<i>powiat</i>) self-financing and co-financing</li> </ul>	<ul style="list-style-type: none"> <li>Municipal self-financing and co-financing</li> <li>Environmental protection tool, e.g. Environmental Fund in Pilsen</li> </ul>	<ul style="list-style-type: none"> <li>Municipal self-financing or co-financing</li> <li>No special municipal grant programmes</li> <li>Compensating payments from the impact regulation of the Federal Nature Conservation Act and the Federal Building Code</li> </ul>
<b>External public co-financing</b>	<ul style="list-style-type: none"> <li>EU Funds, e.g.: <ul style="list-style-type: none"> <li>Interreg,</li> <li>Operational Programmes, e.g. Infrastructure and Environment, Human Capital or Regional Operational Programmes for Voivodeships</li> <li>LIFE+</li> <li>JESSICA</li> </ul> </li> <li>National Funds: <ul style="list-style-type: none"> <li>National Fund for Environmental Protection and Water Management Fund (NFOŚiGW)</li> <li>Ministry for the Environment Programmes, e.g. Flood Safety Programme for the Middle Vistula River</li> </ul> </li> <li>Regional Funds: <ul style="list-style-type: none"> <li>16 Regional Funds for Environmental Protection and Water Management (WFOŚiGW)</li> </ul> </li> <li>Others: <ul style="list-style-type: none"> <li>European Economic Area Financial Mechanism and Norway Grants</li> <li>Swiss-Polish Cooperation Programme or the so-called Swiss Fund</li> <li>EcoFund (until May 2011)</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>EU Funds, e.g.: <ul style="list-style-type: none"> <li>Interreg</li> <li>Regional Operational Programme NUTS II</li> <li>Operational Programme “Environment”</li> <li>LIFE+</li> </ul> </li> <li>State Funds <ul style="list-style-type: none"> <li>Povodí, state enterprise</li> <li>Programme for the Restoration of Natural Landscape Functions by the Ministry of the Environment (prepared for the future)</li> <li>Support for flood prevention by the Ministry of Agriculture</li> <li>State Transportation Infrastructure Fund (for pedestrian paths and cycle tracks along rivers)</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>EU Funds, e.g.: <ul style="list-style-type: none"> <li>Interreg</li> <li>LIFE+</li> </ul> </li> <li>Federal Government and State Programmes <ul style="list-style-type: none"> <li>Federal Water and Shipping Authority (only relevant for federal waterways)</li> <li>Programme for the Protection of Urban Architectural Heritage</li> <li>Aid Programme for Urban Development Measures (only relevant for rivers in formally designated redevelopment areas)</li> <li>Joint Task “For the Improvement of the Regional Economic Structure (only relevant for rivers in structurally weak regions)</li> <li>Brown Coal Agreement (only relevant for the states of Saxony, Saxony-Anhalt and Brandenburg)</li> </ul> </li> <li>Subsidies by Federal States <ul style="list-style-type: none"> <li>Subsidies for state horticultural shows and green projects</li> <li>Public foundations for nature protection, e.g. Foundation Nature Conservation Fund in Baden-Württemberg or Saxon Regional Conservation Foundation</li> <li>Funding guidelines, e.g. Funding Guideline Water Management and Landscape Management Guideline in Baden-Württemberg and Funding Guideline Water Bodies / Flood Protection in Saxony</li> <li>State initiatives, e.g. Initiative “Our Neckar” in Baden-Württemberg</li> </ul> </li> <li>Others <ul style="list-style-type: none"> <li>Regional associations, e.g. Verband Region Stuttgart (VRS)</li> </ul> </li> </ul>

	<b>Poland</b>	<b>Czech Republic</b>	<b>Germany</b>
<b>Private co-financing</b>	<ul style="list-style-type: none"> <li>• No results</li> </ul>	<ul style="list-style-type: none"> <li>• No results</li> </ul>	<ul style="list-style-type: none"> <li>• Foundations</li> <li>• Municipal right to involve benefiting property owners and holders of water utilisation rights</li> <li>• Adjustment payment by property owners within formally designated redevelopment areas (only relevant for rivers in such an area)</li> <li>• Voluntary payments, e.g. donations</li> </ul>
<b>Public-private partnership</b>	<ul style="list-style-type: none"> <li>• No results</li> </ul>	<ul style="list-style-type: none"> <li>• No results</li> </ul>	<ul style="list-style-type: none"> <li>• No results</li> </ul>

## 3.3 Costs and benefits of urban river revitalisation

### 3.3.1 Costs of river revitalisation projects

The revitalisation of urban river spaces is very cost-intensive. Exact costs strongly depend on the individual conditions, but in any case, all expected costs should be accounted for as accurately as possible from the start in order to avoid miscalculation. Figure 3.3-1 gives an overview of the different kinds of costs which have to be considered right from the planning stage.

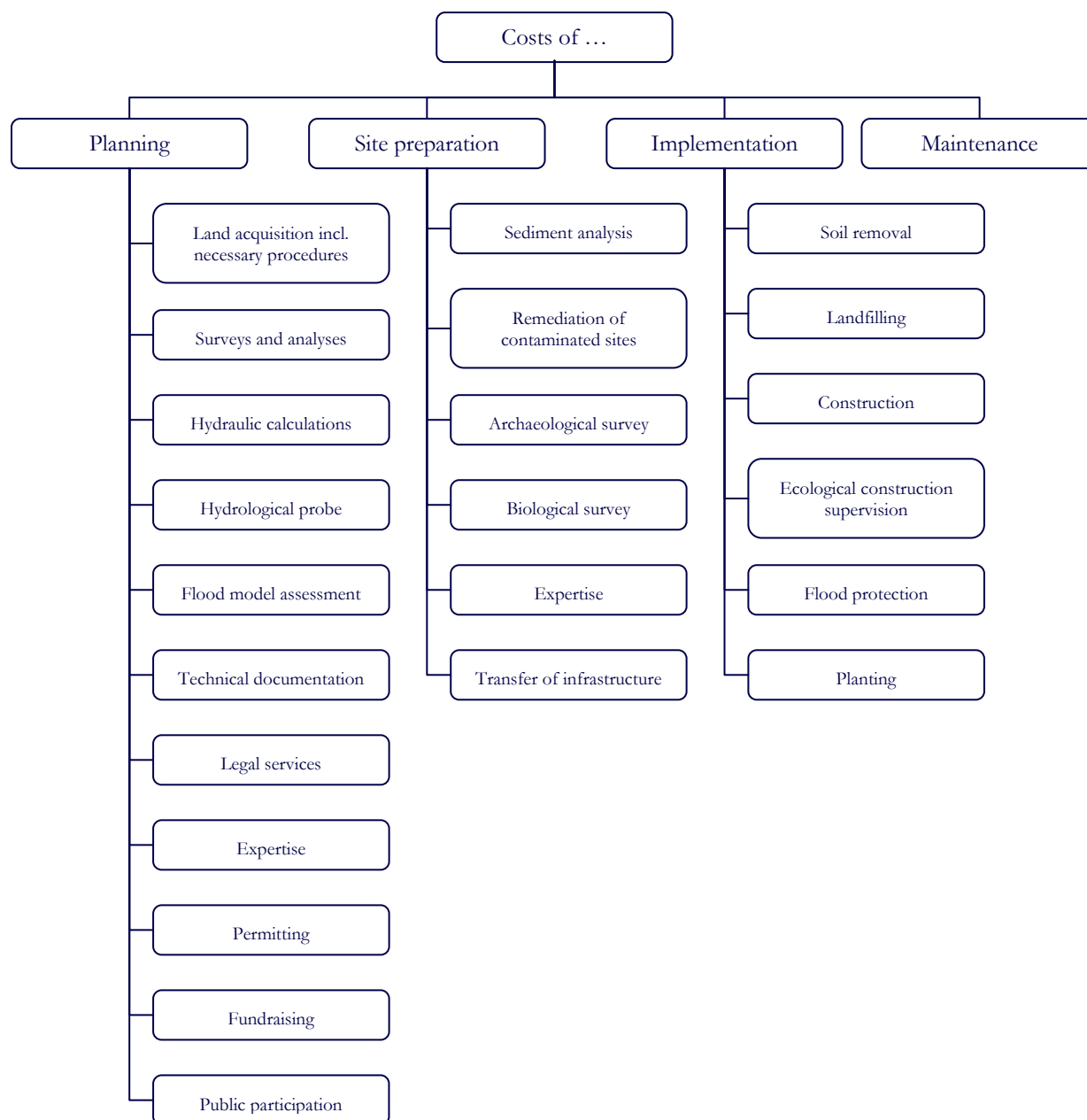


Figure 3.3-1: Costs occurring in urban river revitalisation (© REURIS project team).



## 3.3.2 Benefits of urban river revitalisation

### 3.3.2.1 Approach

The framework for this description of the benefits of urban river revitalisation is the ecosystem services approach. There is no standardised definition of ecosystem services, but according to the definition of the Millennium Ecosystem Assessment, which has been cited most widely, ecosystem services “are the benefits people obtain from ecosystems” (Hassan et al., 2005: 27). A more extensive definition by Fisher and Turner (2008) says that “ecosystem services are the aspects of ecosystems utilized (actively or passively) to produce human well-being”.

Both definitions show that the approach is an anthropocentric concept. When humans are involved as valuing agents, ecosystem functions become so-called ecosystem services (cf. De Groot et al., 2002). The intrinsic value of ecosystems is considered only insofar as people place a value on ecosystems, simply because of the fact that they exist (cf. Hassan et al., 2005: 33f.). See the discussion of existence value and intrinsic value in chapter 3.3.2.2.

The Millennium Ecosystem Assessment divides ecosystem services into four categories: “On the one side, there are provisioning services, regulating services and cultural services. They are assisted by supporting services” (Hassan et al., 2005: 26). Figure 3.3-2 illustrates the linkages between these categories of ecosystem services and different components of human well-being. That the arrows are of a different width shows that the linkages differ in strength. The strength of these linkages varies in different ecosystems and regions (cf. Hassan et al., 2005: 28).

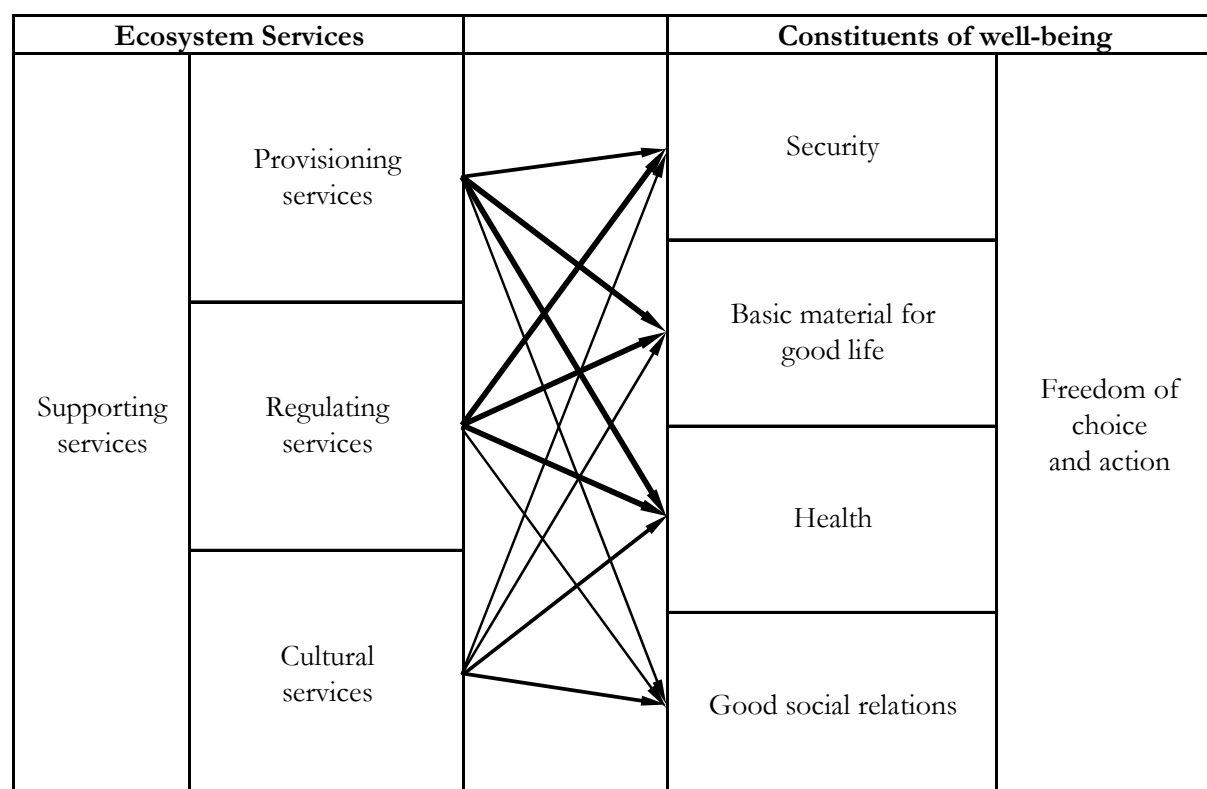


Figure 3.3-2: Linkages between ecosystem services and components of human well-being (adapted from Hassan et al., 2005: 28).

### 3.3.2.2 Definition of terms

#### Benefits induced by ecosystem services

While the above-mentioned Millennium Ecosystem Assessment assumes that ecosystem services and benefits are the same, for a more detailed analysis, it is useful to distinguish between benefits and ecosystem services in order to avoid double counting. Thus, benefits can be defined as the contribution of a good or service to a specific individual or social goal (cf. Costanza, 2000). Boyd and Banzhaf (2007) use the example of recreational angling to illustrate the difference: Angling itself is not an ecosystem service, but it requires ecosystem services such as the provision of surface water and fish populations. When these ecosystem services are used in combination with other goods or services like a tackle, a boat, time allocation and access, they lead to the benefits of recreational angling. With regard to the huge amount of interactions between ecosystems and society, Everard and Moggridge (2011) emphasise that ecosystem services have to be coherent in a way, “such that the realisation of a target benefit is not achieved at cost to other benefits and their beneficiaries”.

The ecosystems analysed here are urban river spaces, even those spaces that are not natural ecosystems. According to O’Gorman et al. (2010), it can be supposed that this approach is applicable (ibid: 8).

#### Total economic value

The total economic value comprises all financial, ecological and social values of a certain object of investigation (see Figure 3.3-3). It is important not to confuse economic and financial value because economic analysis “denotes a wider social interpretation of inputs and outputs than the narrower range which is the focus of financial or cash-flow analysis” (Pearce, 2006: 71). The financial value would be incomplete, because there are also many ecosystem services generating benefits for which there is no market. Furthermore the market price does not necessarily express the whole value people place on an ecosystem service. Their willingness to pay could be higher than the market price.

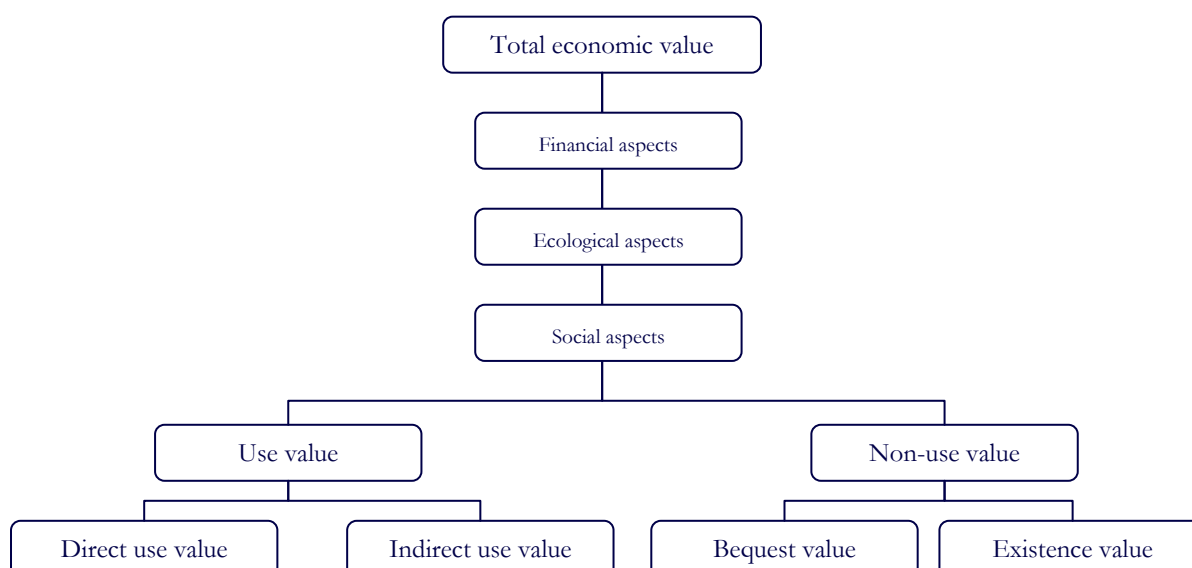


Figure 3.3-3: Categories of economic values (adapted from Thurston et al., 2009: 5).

Figure 3.3-3 also shows that the total economic value can be further divided into use values and non-use values. Use values are relevant, if a good or a service is consumed or enjoyed directly, and they can be further divided into direct values and indirect values. One example of a direct value is a watercourse that

provides fishes which can be directly caught and eaten. An indirect use value may be safe bathing water quality resulting from water filtration provided by wetlands.

In addition to use values there are non-use values, which a person derives from a good or service without using it directly and which is therefore less tangible. Non-use values can be divided into bequest value and existence value. Bequest value is the value people of the current generation put on the preservation of environmental goods like urban river spaces so that future generations can benefit from them. Existence value is the value people derive from simply knowing that an environmental good will be protected, though they know that they will never enjoy it on their own. For example, an urban river space may provide a person with a cultural service because of its historical significance, even if the person lives far away and never intends to visit the river space (cf. Thurston et al., 2009: 5). Distinguishing the different kinds of values is important because, firstly, this concept makes it possible to determine whether all beneficial aspects are included in an analysis, and secondly, because appropriate method for measuring the benefits depends on them.

As the benefits express the economic values of ecosystem services to the public, in the following section the terms “benefit” and “value” are used interchangeably.

## **Intrinsic value**

As mentioned above, economic values are always expressed from a human perspective, and the ecosystem services approach is a limited analysis of the contributions which ecosystem services make to human well-being. In this framework, the mere existence of environmental goods or services only counts if it is appreciated by people. This also means that economic values never reflect the total value of environmental goods because humans are only a small part of the ecosystem. The considered ecosystem good may have a significant importance for the survival of other species or for the maintenance of a particular ecosystem itself, whether or not it is relevant to humans (cf. Farber et al., 2002; Pearce et al., 2006: 87f.; Young, 2005: 24). This can be illustrated with the help of the following example: At a given point, the marginal economic value of additional rainfall may be zero or even negative, because it would lead to floods. At the same time, it may be of significant importance to a certain plant species which is completely irrelevant to humans. Therefore, it is possible that the intrinsic value of an environmental good within the ecosystem differs from its economic value. Sometimes the intrinsic value of ecosystems is also called ecological value, for instance by Farber et al. (2002).

### **3.3.2.3 Opportunities for and limitations of economic valuation**

Sometimes attempts at valuation of ecosystems are criticised as impossible. This view has been found among people who believe that environmental goods have an absolute right to be protected and who refuse to accept the implication that these goods could be traded for money or other goods (cf. Spash and Hanley, 1995).

However, it has to be emphasised that valuation occurs automatically. It is implied in decision-making because every choice to be made requires a relative weighting of different factors (cf. Costanza, 2000). For example, prior to the decision to start a river revitalisation project aiming at the improvement of flood protection in order to avoid damage costs a choice is always made whether this is the best option, or whether other options such as the construction of a dike would be better. The main advantage of economic valuation is that it allows measuring the intensity of individual preferences for environmental services with the help of monetary terms (cf. Young, 2005: 34).

Usually, the subject of an economic valuation is the change of an environmental service in comparison to the status quo. For example, one can measure what amount of money people would be willing to pay for the restoration of a river (cf. Thurston et al., 2009: 5).

Young (2005) suggests that although it is more time- and resources-consuming to determine the economic benefits of water in a more precise way than is usually expected, it is useful to conduct economic valuation studies because monetisation can contribute to better decision-making concerning ecosystem services (ibid: 16). Monetisation allows an apples-to-apples comparison of two or more potential projects, weighing up the costs against the benefits, evaluating which parts of society are beneficiaries or losers and, finally, it can provide a basis for promoters of river revitalisation projects in justifying their request for financial resources to decision makers (cf. Morse-Jones, 2010: 1f.; Thurston et al., 2009: 1).

### 3.3.2.4 Categories of benefits from urban river revitalisation

Every river revitalisation project generates costs which can be divided into different categories. In the same way, benefits can be categorised. In Table 3.3-1, various benefits generated by revitalised urban rivers and streams are listed on the left side and supplemented by ecosystem services on the right side. Benefits and ecosystem services which are expected to be generated by the pilot actions of the REURIS project are listed in chapter 3.3.3.

Table 3.3-1: Examples of benefits generated by the ecosystem services of river spaces (adapted from Boyd and Banzhaf, 2007; Costanza et al., 1997).

Benefits	Ecosystem services
Commercial and subsistence harvest	<ul style="list-style-type: none"> <li>• Food provision</li> </ul>
Drinking water provision	<ul style="list-style-type: none"> <li>• Provision of a particular level of water quality</li> <li>• Groundwater recharge improvement</li> </ul>
Bequest value and existence value	<ul style="list-style-type: none"> <li>• Provision of opportunities for non-commercial uses and non-use fulfilment</li> </ul>
Business opportunities	<ul style="list-style-type: none"> <li>• Provision of opportunities for commercial uses</li> </ul>
Property value	<ul style="list-style-type: none"> <li>• Provision of river space associated features</li> <li>• Provision of natural landscape</li> </ul>
Property damage avoidance	<ul style="list-style-type: none"> <li>• Flood protection</li> <li>• Soil retention</li> </ul>
Health damage avoidance	<ul style="list-style-type: none"> <li>• Flood protection</li> <li>• Climate regulation</li> <li>• Greenhouse gas regulation</li> <li>• Water quality provision</li> <li>• Nutrient cycling</li> <li>• Pollution removal</li> <li>• Habitat provision for predator populations hostile to disease transmissions</li> <li>• Noise protection</li> </ul>
Waste treatment	<ul style="list-style-type: none"> <li>• Retention</li> <li>• Removal of excess nutrients and pollutants</li> </ul>
Social cohesion	<ul style="list-style-type: none"> <li>• Provision of open space inviting users to stop and enjoy</li> <li>• Provision of an attractive residential environment</li> <li>• Provision of opportunities for education and training</li> </ul>
Recreational water sports, e.g. swimming, angling	<ul style="list-style-type: none"> <li>• Provision of opportunities for recreational water sports</li> </ul>
Recreational land use, e.g. hiking, cycling	<ul style="list-style-type: none"> <li>• Provision of opportunities for recreational land use</li> </ul>

It always depends on the perspective of the evaluating person which benefit is generated by an ecosystem service. One example may be a project aiming at better flood protection. In such a case, improved flood protection is an ecosystem service provided by the new biophysical structure of the river space. The benefit generated by this service may be a function of, on the one hand, the extent to which damage costs are avoided and, on the other hand, the extent to which people value the reduction of flood risk because of its influence on human health (cf. O'Gorman et al., 2010: 8f.).

The perspective of the evaluating person also determines whether an environmental feature can be seen as a final ecosystem service or as only an intermediate component. This is illustrated with the help of an example of water quality in Table 3.3-2. While the provision of water quality is an ecosystem service for the benefit of recreational swimming, it is only an intermediate component for the benefit of angling because its value is reflected in the value of the fish population which would otherwise not exist (cf. Boyd and Banzhaf, 2007).

Table 3.3-2: Ecosystem services for recreational angling versus recreational swimming (adapted from Boyd and Banzhaf, 2007).

Benefit	Final ecosystem services	Intermediate components
Recreational angling	<ul style="list-style-type: none"> <li>Provision of surface water and fish population</li> </ul>	<ul style="list-style-type: none"> <li>Water quality</li> <li>Habitat quality</li> </ul>
Recreational swimming	<ul style="list-style-type: none"> <li>Provision of water quality</li> </ul>	<ul style="list-style-type: none"> <li>Wetlands</li> <li>Natural river bank covers</li> </ul>

The benefits listed in Table 3.3-1 can be use values as well as non-use values. What kind of values they are depends on people's perspectives. They are use values for people enjoying the revitalised river directly and non-use values for people who do not. This distinction is relevant to the choice of an appropriate method for measuring benefits.

### 3.3.2.5 Quantification of benefits

There are different countable and measurable indicators the change of which can help to quantify the benefits of urban river spaces. The changes can be measured in an absolute or relative way. Table 3.3-3 gives an overview without claiming to be complete.

Table 3.3-3: Indicators for the quantification of benefits (© REURIS project team).

Improvement of or increase in ...	Change of indicators
Commercial and subsistence harvest	<ul style="list-style-type: none"> <li>Increase in the number of commercial fish species</li> </ul>
Drinking water provision	<ul style="list-style-type: none"> <li>Increase in size of water protection area</li> </ul>
Bequest value and existence value	<ul style="list-style-type: none"> <li>Increase in number of plant species</li> <li>Increase in number of animal species</li> <li>Increase in number of habitats</li> <li>Increase in hemeroby</li> </ul>
Business opportunities	<ul style="list-style-type: none"> <li>Increase in number of companies in the riparian neighbourhood</li> </ul>
Property value	<ul style="list-style-type: none"> <li>Increase in number of purchase offers</li> <li>Increase in market price of the property</li> </ul>
Property damage avoidance	<ul style="list-style-type: none"> <li>Increase in degree of retention capacity enhancement</li> </ul>
Health damage avoidance	<ul style="list-style-type: none"> <li>Increase in degree of water quality improvement</li> <li>Increase in degree of retention capacity enhancement</li> </ul>
Waste treatment	<ul style="list-style-type: none"> <li>Decrease in concentration of pollutants in the water</li> <li>Decrease in concentration of pollutants in the soil</li> </ul>
Social cohesion	<ul style="list-style-type: none"> <li>Increase in number of pupils/students visiting the river</li> <li>Increase in number of visitors</li> <li>Increase in duration of visitors' stay</li> <li>Increase in frequency of visits per visitor</li> </ul>
Recreational water sports	<ul style="list-style-type: none"> <li>Increase in value of sold fishing licences</li> <li>Increase in number of water sportsmen (anglers, canoeists, etc.)</li> </ul>
Recreational land use	<ul style="list-style-type: none"> <li>Increase in number of visitors (walkers, cyclists, etc.)</li> <li>Increase in duration of visitors' stays</li> <li>Increase in frequency of visits per visitor</li> </ul>



### 3.3.2.6 Monetisation of benefits

If the aim is to compare costs and benefits, they need to be expressed in the same unit and quantifying the benefits with the help of indicators is not sufficient. Instead it is necessary to express the benefits in monetary terms. For some benefits which automatically imply a monetary value, such as an increase in property value, this is clear, but for all those which are not market-related an economic analysis must be conducted. De Groot et al. (2002) distinguish four major types of economic valuation methods:

- direct market valuation  
*This valuation measures the exchange value ecosystem services have in trade.*
- indirect market valuation  
*This valuation is used for estimating the benefits from ecosystem services not captured by market mechanisms by observing actual purchase behaviour in related markets (cf. Pearce, 2006: 92; Thurston et al., 2009: 16). The following techniques belong to this type of valuation method. They are also called revealed preference methods.*
  - avoided cost method (ACM)  
*This method is used for estimating the cost which a society can avoid with the help of a specific ecosystem service; for instance, flood control helps to avoid property damage.*
  - replacement cost method (RCM)  
*This method is used for measuring the cost which is incurred if a specific ecosystem service were to be replaced by a human-made system; for example, pollution removal by a river system could be replaced with costly artificial treatment systems.*
  - factor income method (FIM)  
*This method estimates the income which is enhanced by a specific ecosystem service; for example, the incomes of fishermen are enhanced if commercial fisheries increase due to improved natural water quality.*
  - travel cost method (TCM)  
*This method measures the cost incurred if people are willing to travel to use a specific ecosystem service; for instance, a famous whitewater river can attract distant kayakers.*
  - hedonic pricing method (HPM)  
*This method determines the prices people pay for associated goods to use a specific ecosystem service; for example, how much people pay to rent a house to enjoy the view of a beautiful river space.*
- stated preference methods  
*These methods consist of a survey where hypothetical scenarios with different alternatives are described to estimate the willingness to pay for the availability of ecosystem services or the willingness to accept the loss of ecosystem services. Examples of this group of valuation techniques are contingent valuation (CV), contingent ranking (CR) and choice experiments (CE).*
- group valuation  
*With the help of this method the willingness to pay for the availability of ecosystem services or the willingness to accept the loss of ecosystem services is estimated within an open debate instead of aggregating separately measured individual preferences.*

In addition to these above listed valuation methods, there is benefits transfer (BT). It aims at transferring the results of a valuation study from one context to another because it would be impossible to conduct a separate valuation study for every single environmental service in every single region.

All methods have their strengths and weaknesses. The following paragraphs do not concentrate on direct market valuation because the main challenge lies in estimating the value of the many ecosystem services which are not traded in markets. The discussion starts with two frequently used revealed preference methods, namely travel cost method and hedonic pricing method.

Application of the travel cost method is complicated by the fact that it may not be possible to define precisely how the travel costs illustrate the value people set on the visited site, because it may be possible that they visit more than just the investigated site during the same trip, or that the travel itself is not considered a cost but has also a value for them (cf. Pearce, 2006: 102).

The hedonic pricing method requires comparing a sample of similar goods which, in a best-case scenario, differ only in the value which is the object of investigation. As it is rather improbable that such a sample can be found, it is difficult to measure the value of exactly this characteristic without confounding it with other components which also influence peoples' purchase decisions.

Revealed preference methods are sometimes considered to be more reliable than stated preference methods because they deduce peoples' preferences from actual decisions and market information instead of "constructing" hypothetical markets (cf. Pearce, 2006: 93). However, in comparison to revealed preferences, stated preference methods, such as contingent valuation and group valuation, have the advantage that they can encompass all kinds of benefits. Thus, they work not only with ex-post scenarios, but also with hypothetical ex-ante scenarios and thus they can be applied for the valuation of future planning processes. In addition, stated preference methods allow the estimation of non-use values (ibid: 106; Young, 2005: 157). It should be mentioned that these tools can help to reveal the intrinsic value, even if they cannot really measure it. Stated preference methods should always inquire about the motives behind the respondent's willingness to pay. The respondents could state that the object of investigation, such as a revitalised river, simply has the right to exist (Pearce et al., 2006: 88).

While most economic valuation methods are based on the study of individual preferences aggregated for the estimation of the value which a certain society (e.g. a state or a nation) places on the ecosystem service under examination, group valuation allows the organising of preference formation as a social process including knowledge sharing and other group interactions. This method may be appropriate for the estimation of values which are more communal than others, such as the value of a river space, which is closely connected with the social system or the folklore of a community (cf. Farber et al., 2002). Usually, these socio-cultural values, such as a community's sense of identity with a particular river space and other values, such as its intrinsic value, cannot be quantified. These values may be better described in a qualitative way (cf. Morse-Jones et al., 2010: 2) and group valuation can be a suitable instrument. Furthermore, group valuation can also be applied within the framework of the different stakeholder participation methods described in Manual Part 2.

It is important to interpret the measured valuation within a site-specific spatial context because both the biophysical structure of the ecosystem and the socio-economic background of the valuing persons are spatially explicit (cf. Morse-Jones et al., 2010: 4; Young, 2005: 5). This is one of the reasons why benefits transfer is difficult to implement. Yet despite the practical and theoretical problems in its application, benefits transfer is useful because it allows for huge meta-analyses. Figure 3.3-4 indicates that the required level of accuracy is strongly influenced by the aim of the benefits transfer.

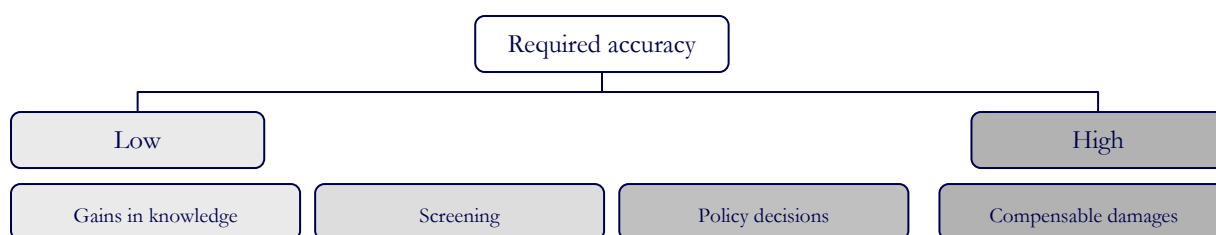


Figure 3.3-4: Required accuracy of benefits transfer for different decision settings (adapted from Brookshire, 1992: 6).

If the benefits transfer is only intended to gain more knowledge about a particular benefit from a project or for an initial screening of the value of different projects, a relatively low level of accuracy may be sufficient. However, if the benefits transfer is conducted for a specific policy decision or for the calculation of a compensation package for damages caused by a certain project, a relatively high level of accuracy is necessary. In these cases benefits transfer is only justifiable if its validity can be proven. Otherwise, it is obligatory to conduct an original valuation study (cf. Brookshire, 1992: 6).

In general, it is important to avoid double counting. It can occur if the results of different valuation studies are aggregated. Then it may happen that the value of an ecosystem service which has been valued

separately but which is also the intermediate contribution for a final benefit also considered in the same aggregation is counted twice (cf. De Groot et al., 2002). Therefore, only the final benefits of ecosystem services should be considered whereas intermediary components including supporting ecosystem services should be ignored (cf. O'Gorman et al., 2010: 8; Boyd and Banzhaf, 2007).

Finally, which set of valuation techniques is appropriate depends on the benefits or ecosystem services to be measured. For example, the recreational value of an ecosystem can be measured with the help of the travel cost method and also the factor income method, because they both comprise the value which visitors attach to a site, and also the value of increased incomes resulting from the use of the site for recreational purposes (cf. Farber et al., 2002). Hence, the usage of only one valuation technique often leads to incomplete results.

Insight into which valuation technique is applicable for different kinds of benefits is given in Table 3.3-4, showing how the different methods are used for estimating the value of ecosystem services.

Table 3.3-4: Assignment of valuation techniques and ecosystem services (adapted from de Groot et al., 2002).

Ecosystem services	Direct market pricing	Indirect market pricing					Stated preference methods	Group valuation
		Avoided cost	Replacement cost	Factor income	Travel cost	Hedonic pricing		
<b>Provisioning services</b>								
Water provision	x	x	x	x	x	x	x	x
Habitat provision	x	x	x	x		x	x	x
Food provision	x		x	x			x	x
<b>Regulating services</b>								
Carbon savings		x	x	x			x	x
Flood protection and alleviation, water conveyance		x	x	x		x	x	x
Water regulation	x	x	x	x		x	x	x
Pollution removal		x	x	x		x	x	x
Soil retention		x	x	x		x	x	x
<b>Cultural services</b>								
Recreation opportunities	x		x	x	x	x	x	
Visual amenities			x		x	x	x	x
Artistic aspects	x			x	x	x	x	x
Spiritual and historic aspects					x	x	x	x
Education opportunities	x			x	x		x	x

### 3.3.2.7 Literature review of European case studies

Table 3.3-5 shows a list of studies on the measurement of benefits from the revitalisation or the protection of river spaces in Europe. Due to the low number of studies dealing with urban river spaces, the table is not limited to this very specific topic but also includes studies on rural areas. The table is sorted according to the countries where the investigated river spaces are located.

The values in Table 3.3-5 give a first impression of the benefits estimated in the case studies. However, these values are not directly comparable. The interpretation of the values requires a deeper look at each study's background, such as methodology and socio-economic aspects of the study site. As the case studies are from different countries and years, among other distinctions, a conversion of the values to one common currency unit under consideration of the purchasing-power parity would be necessary.

Table 3.3-5 indicates how diverse the factors studied in the field of river revitalisation are, which can be assessed with the help of economic valuation. The most popular valuation method is contingent valuation with its manifold varieties of study design. Thus, the hypothetical payment instruments for measuring the willingness to pay (WTP), such as taxes, entrance fees or others, can be chosen according to the respondents' habits. Some studies used different valuation methods for the same issue and compared them to ensure a good validity of the results.

Table 3.3-5: Studies about the value of river spaces in Europe (© University of Leipzig).

Country	Author, year	River	Method	Main results
AT	Kosz (1996)	Danube Floodplain National Park	CV	<ul style="list-style-type: none"> <li>WTP for entrance to the national park: 50 - 80 ÖS/visit</li> </ul>
CH	Schwarzwälder et al. (2010)	Dünnern, Sorne, Glatt and Broye	CE	<ul style="list-style-type: none"> <li>WTP for paths along rivers: 21 - 167 CHF/year;</li> <li>WTP for 1 additional revitalised km of the river: 16 - 37 CHF/year</li> <li>WTP for river revitalisation in general: 0 - 149 CHF/year</li> </ul>
CZ, DE	Jílková et al. (2010)	Elbe, Ploučnice and Wesenitz	CV	<ul style="list-style-type: none"> <li>WTP for an Elbe lido: 0,77 - 1,83 EUR/month as a tax 1.78 - 3.30 EUR/day as an entrance fee</li> <li>WTP for a nature trail along the river: 1.00 - 1.25 EUR/month as a tax 3.63 - 5.73 EUR as a donation</li> </ul>
DE	Kölbel (2010)	Neckar	CV	<ul style="list-style-type: none"> <li>WTP for bathing in the river: 20 EUR/year</li> <li>WTP for wetland revitalisation: 25 EUR/year</li> </ul>
DE	Meyerhoff et al. (2010)	140 bathing sites at lakes and rivers in Berlin	CE	<ul style="list-style-type: none"> <li>WTP for prevention of 1 day of bad water quality: 0.15 EUR/visit;</li> <li>WTP for setting up of information signs: 0.42 EUR/visit;</li> <li>WTP for provision of showers and toilets: 0.96 EUR/visit</li> </ul>
DE	Meyerhoff and Dehnhardt (2007)	Elbe	CV, RCM	<ul style="list-style-type: none"> <li>WTP for species and habitat protection: 5.30 - 11.90 EUR/year</li> <li>Value of 15,000 ha additional flood plain: 8.7 million - 26 million EUR</li> </ul>
DE	Bräuer and Marggraf (2004)	Jossa	RCM	<ul style="list-style-type: none"> <li>Value of increased nitrogen retention caused by beaver reintroduction: 12,000 EUR/year</li> </ul>
DK	Dubgaard et al. (2005)	Skjern	BT	<ul style="list-style-type: none"> <li>Value of increased reed production: 350,000 DKK/year</li> <li>Value of reduced flood risks: 30,000 DKK/year</li> <li>Value of nitrogen reduction: 1.7 million DKK/year</li> </ul>

Country	Author, year	River	Method	Main results
				<ul style="list-style-type: none"> <li>• Value of reduced ochre emission: 1.3 million DKK/year</li> <li>• Value of CO<sub>2</sub> reductions: 1.4 million DKK/year</li> <li>• Value of hunting improvement: 500,000 DKK/year</li> <li>• Value of angling improvement: 2.8 - 4.6 million DKK/year</li> <li>• Value of non-extractive outdoor recreation: 3.6 million DKK/year</li> <li>• Non-use value of enhanced biodiversity: 2.7 million DKK/year</li> </ul>
FR	Amigues et al. (2002)	Garonne	CV	<ul style="list-style-type: none"> <li>• WTP for riparian habitat preservation: 35 - 133 FF/year</li> </ul>
IE	Hynes and Hanley (2006)	Roughty	TCM	<ul style="list-style-type: none"> <li>• Value of whitewater kayaking: 440,000 - 880,000 EUR/year</li> </ul>
NL	Brouwer and van Ek (2004)	Rhine and Meuse delta	BT	<ul style="list-style-type: none"> <li>• Value of flood damage avoidance: 3.3 billion EUR for the next 100 years</li> <li>• Value of recreation improvement: 4 million EUR/year</li> </ul>
PL	Biol et al. (2007)	Bobrek wetland	CE	<ul style="list-style-type: none"> <li>• WTP for flood risk avoidance, recreation improvement and biodiversity conservation: 161,6 PLN/household/month</li> </ul>
PL	Ciszewska (1997)	Biebrza national park	CV	<ul style="list-style-type: none"> <li>• WTP for protection measures in the national park: 37 US\$</li> </ul>
UK	Everard et al. (2011)	Maves Brook	BT	<ul style="list-style-type: none"> <li>• Value of climate regulation improvement: 13,000 GBP/year</li> <li>• Value of flood risk reduction: 10,000 GBP/year</li> <li>• Value of erosion reduction: 5,000 GBP/year</li> <li>• Value of recreation and tourism improvement: 815,000 GBP/year</li> <li>• Value of education improvement: 5,000 GBP/year</li> <li>• Value of nutrient cycling improvement: 21,000 GBP/year</li> <li>• Value of wildlife habitat improvement: 10,000 GBP/year</li> </ul>
UK	Hanley et al. (2006)	Motray and Brothock	CE, BT	<ul style="list-style-type: none"> <li>• WTP for river ecology improvement: 23 - 36 GBP/year</li> <li>• WTP for low flows reduction: 2.70 - 3.87 GBP/year</li> </ul>
UK	Hanley et al. (2006)	Wear and Clyde	CE; BT	<ul style="list-style-type: none"> <li>• WTP for healthy wildlife and plant populations: 18.19 - 20.17 GBP/month</li> <li>• WTP for absence of litter in the river: 15.68 - 16.91 GBP/month</li> <li>• WTP for river banks in good condition with only natural levels of erosion: 19.57 - 21.53 GBP/month</li> </ul>
UK	Johnstone and Markandya (2006)	Different rivers in the UK	TCM	<ul style="list-style-type: none"> <li>• Value of a 10% change in river quality: 0.04 - 3.93 GBP/visit</li> </ul>
UK	Georgiou et al. (2000)	Tame	CR, CV	<ul style="list-style-type: none"> <li>• WTP for water quality improvement: 2.76 - 5.08 GBP/household/year</li> </ul>
UK	Green and Tunstall (1991)	Different rivers in England and Wales	CV	<ul style="list-style-type: none"> <li>• WTP for river water quality improvement: 1.35 - 1.66 GBP/month</li> </ul>



### 3.3.3 Experiences in the context of REURIS

Within the REURIS project, there was no capacity to measure the benefits of the six pilot actions in monetary terms, but Table 3.3-6 gives a comprehensive overview of the different benefits which are expected to result from the pilot action investments.

Final benefits are written in bold type and indicated with a grey background, but Table 3.3-6 also lists the different ecosystem services leading to them because it is possible that a project is aiming only at specific ecosystem services and therefore a limitation on the final benefits would not properly reflect the variety of aims the pilot actions are pursuing.

At the same time, the project partners have marked for whom the benefits and ecosystem services are most relevant. The beneficiaries of the pilot actions are divided into the following groups:

- C: companies
- G: governmental institutions
- I: inhabitants

*Inhabitants are defined as inhabitants of the city, even if they live in another district which is rather far from the pilot action site.*

- O: property owners
- T: tourists

*Tourists are defined as visitors from other cities.*

- S: society

*Society should be listed as a beneficiary if a benefit is relevant for people who are neither inhabitants nor tourists, meaning those who do not live in the city and who do not intend to visit the riverside.*

In addition, footnotes mark the spatial classification of the beneficiary groups:

- C<sub>W</sub>, I<sub>W</sub>, O<sub>W</sub>: waterfront level
- C<sub>D</sub>, G<sub>D</sub>, I<sub>D</sub>, O<sub>D</sub>: district level
- C<sub>C</sub>, G<sub>C</sub>, I<sub>C</sub>, O<sub>C</sub>: city level
- C<sub>R</sub>, G<sub>R</sub>, I<sub>R</sub>, O<sub>R</sub>, T<sub>R</sub>: regional level
- C<sub>N</sub>, G<sub>N</sub>, I<sub>N</sub>, O<sub>N</sub>, T<sub>N</sub>: national level

In Table 3.3-6, these codes are written in **bold type** for beneficiary groups who profit from a certain ecosystem service **in a very important way**, and they are written in normal type for beneficiary groups who profit in a minor way. Beneficiary groups that are not relevant are not listed.

Table 3.3-6: Benefits expected from the river spaces being revitalised within the pilot actions of the REURIS project (© REURIS project team).

Improvement of or increase in...	Ślepiotka (Katowice)	Old Canal (Bydgoszcz)	Old Ponávka (Brno)	Božkov Island (Pilsen)	Feuerbach (Stuttgart)	Thostgrundbach (Grimma)
<b>Commercial and subsistence harvest</b>						
Food provision	-	-	-	-	-	-
<b>Drinking water provision</b>						
Provision of a particular level of water quality	-	-	-	-	-	-
Groundwater recharge improvement	-	-	-	-	I <sub>C</sub>	-
<b>Bequest value and existence value</b>						
Biodiversity conservation and enhancement	I <sub>w</sub> , O <sub>w</sub> , I <sub>D</sub> , S	I <sub>w</sub> , O <sub>w</sub> , I <sub>D</sub>	-	S	S	S
Promotion of native species	I <sub>w</sub> , O <sub>w</sub> , I <sub>D</sub> , G <sub>C</sub> , I <sub>C</sub> , S	I <sub>w</sub> , O <sub>w</sub> , I <sub>D</sub> , G <sub>C</sub>	-	I <sub>D</sub> , I <sub>C</sub>	S	S
Habitat provision	I <sub>w</sub> , O <sub>w</sub> , G <sub>D</sub> , I <sub>D</sub> , I <sub>C</sub>	I <sub>w</sub> , O <sub>w</sub> , G <sub>D</sub> , I <sub>D</sub>	w, D	I <sub>D</sub> , I <sub>C</sub>	S	S
Provision of pollinators	-	-	-	I <sub>D</sub> , I <sub>C</sub>	I <sub>D</sub>	-
Provision of genetic resources	-	I <sub>w</sub> , O <sub>w</sub> , I <sub>D</sub> , G <sub>C</sub>	-	-	S	S
Water balance conservation and enhancement	O <sub>w</sub> , G <sub>D</sub>	O <sub>w</sub> , G <sub>D</sub>	-	I <sub>D</sub> , I <sub>C</sub>	G <sub>C</sub> , I <sub>C</sub>	O <sub>w</sub> , G <sub>C</sub>
Conservation of and increase in river-related aesthetic features	I <sub>w</sub> , O <sub>w</sub> , G <sub>D</sub> , I <sub>D</sub> , I <sub>C</sub>	I <sub>w</sub> , O <sub>w</sub> , G <sub>D</sub> , I <sub>D</sub>	O <sub>w</sub> , C <sub>D</sub> , I <sub>D</sub>	I <sub>D</sub> , I <sub>C</sub>	I <sub>D</sub> , T <sub>R</sub>	I <sub>D</sub> , I <sub>C</sub>
Conservation of historical heritage	I <sub>w</sub> , O <sub>w</sub> , G <sub>D</sub> , I <sub>D</sub> , I <sub>C</sub>	I <sub>w</sub> , O <sub>w</sub> , G <sub>D</sub> , I <sub>D</sub> , G <sub>N</sub>	I <sub>D</sub> , S	-	-	-
<b>Business opportunities</b>						
Conditions for tourism	C <sub>w</sub> , C <sub>D</sub>	C <sub>C</sub>	T <sub>R</sub>	C <sub>w</sub> , C <sub>D</sub> , T <sub>R</sub>	-	I <sub>C</sub>
Conditions for gastronomy	C <sub>w</sub> , O <sub>w</sub>	C <sub>w</sub> , C <sub>D</sub>	-	O <sub>w</sub> , C <sub>D</sub> , O <sub>D</sub>	-	
Conditions for other sectors	C <sub>w</sub> , O <sub>w</sub> , C <sub>D</sub>	C <sub>w</sub> , C <sub>D</sub> , C <sub>C</sub>	C <sub>w</sub> , O <sub>w</sub> , C <sub>D</sub>	C <sub>w</sub> , O <sub>w</sub> , C <sub>D</sub>	-	
Provision of green spaces for recreation during breaks	I <sub>w</sub> , I <sub>D</sub>	I <sub>w</sub> , C <sub>D</sub> , I <sub>D</sub>	C <sub>w</sub> , O <sub>w</sub> , C <sub>D</sub>	C <sub>w</sub> , I <sub>w</sub>	-	
Connection of the river space to other parts of the city	-	C <sub>w</sub> , I <sub>w</sub> , C <sub>D</sub> , I <sub>D</sub>	I <sub>D</sub> , I <sub>C</sub>	I <sub>D</sub> , I <sub>C</sub>	-	I <sub>w</sub>
Provision of green tracks for non-motorised commuters	C <sub>w</sub> , I <sub>w</sub> , C <sub>D</sub> , I <sub>D</sub>	C <sub>w</sub> , I <sub>w</sub> , C <sub>D</sub> , I <sub>D</sub>	I <sub>D</sub> , I <sub>C</sub>	-	I <sub>C</sub>	I <sub>C</sub>
<b>Property value</b>						
Provision of river space specific features	O <sub>w</sub>	O <sub>D</sub>	I <sub>D</sub>	O <sub>w</sub> , I <sub>D</sub>	-	-
Provision of natural landscape	O <sub>w</sub>	O <sub>D</sub>	I <sub>D</sub>	O <sub>w</sub> , I <sub>D</sub>	-	-
<b>Property damage avoidance</b>						
Flood protection	I <sub>w</sub> , O <sub>w</sub>	I <sub>w</sub> , O <sub>w</sub>	I <sub>w</sub> , O <sub>w</sub>	O <sub>w</sub> , I <sub>D</sub> , O <sub>D</sub>	I <sub>D</sub> , O <sub>D</sub> , G <sub>C</sub>	I <sub>D</sub> , O <sub>D</sub> , G <sub>C</sub>
Protection against soil erosion	O <sub>w</sub>	O <sub>w</sub>	-	-	O <sub>D</sub> , G <sub>C</sub>	-

Improvement of or increase in...	Ślepiotka (Katowice)	Old Canal (Bydgoszcz)	Old Ponávka (Brno)	Božkov Island (Pilsen)	Feuerbach (Stuttgart)	Thostgrundbach (Grimma)
<b>Health damage avoidance</b>						
Flood protection	I <sub>w</sub> , O <sub>w</sub> , G <sub>D</sub>	I <sub>w</sub> , O <sub>w</sub> , G <sub>D</sub>	O <sub>w</sub> , C <sub>D</sub> , I <sub>D</sub>	O <sub>w</sub> , C <sub>D</sub> , I <sub>D</sub> , S	I <sub>D</sub> , G <sub>C</sub>	I <sub>w</sub> , O <sub>w</sub> , G <sub>D</sub>
Climate regulation	I <sub>w</sub>	I <sub>w</sub>	-	S	I <sub>D</sub>	I <sub>w</sub>
Greenhouse gas regulation	-	-	-	-	S	-
Water quality provision	I <sub>w</sub> , O <sub>w</sub> , G <sub>D</sub> , O <sub>D</sub>	I <sub>w</sub> , O <sub>w</sub> , G <sub>D</sub> , O <sub>D</sub>	O <sub>w</sub> , C <sub>D</sub> , I <sub>D</sub>	O <sub>w</sub> , I <sub>D</sub>	I <sub>D</sub> , G <sub>C</sub>	-
Nutrient cycling	-	I <sub>D</sub>	-	-	I <sub>D</sub>	-
Pollution removal	I <sub>w</sub> , O <sub>w</sub> , G <sub>D</sub> , O <sub>D</sub>	I <sub>w</sub> , O <sub>w</sub> , G <sub>D</sub> , O <sub>D</sub>	-	-	I <sub>D</sub>	-
Habitat provision for predator populations hostile to disease transmission	-	-	-	-	I <sub>D</sub>	-
Noise protection	-	-	O <sub>w</sub> , I <sub>D</sub>	-	-	-
<b>Waste treatment</b>						
Retention	-	-	S	-	-	-
Removal of excess nutrients and pollutants	I <sub>w</sub> , I <sub>D</sub>	I <sub>w</sub> , I <sub>D</sub>	-	-	I <sub>D</sub> , G <sub>C</sub>	-
<b>Social cohesion</b>						
Provision of open space inviting users to stop and enjoy	I <sub>w</sub> , O <sub>w</sub> , I <sub>D</sub> , I <sub>C</sub>	I <sub>w</sub> , O <sub>w</sub> , I <sub>D</sub> , I <sub>C</sub>	O <sub>w</sub> , I <sub>D</sub> , I <sub>C</sub>	O <sub>w</sub> , I <sub>D</sub> , I <sub>C</sub> , S	I <sub>C</sub>	I <sub>D</sub> , I <sub>C</sub>
Provision of an attractive residential environment	I <sub>w</sub> , O <sub>w</sub> , I <sub>D</sub> , O <sub>D</sub>	I <sub>w</sub> , O <sub>w</sub> , I <sub>D</sub> , O <sub>D</sub>	C <sub>D</sub> , I <sub>D</sub>	C <sub>D</sub> , I <sub>D</sub>	I <sub>D</sub>	I <sub>D</sub>
Provision of opportunities for education and training	I <sub>w</sub> , G <sub>D</sub> , I <sub>D</sub> , I <sub>C</sub> , I <sub>R</sub>	I <sub>w</sub> , G <sub>D</sub> , I <sub>D</sub> , I <sub>C</sub> , I <sub>R</sub>	I <sub>D</sub> , I <sub>C</sub>	I <sub>D</sub> , I <sub>C</sub>	G <sub>D</sub> , I <sub>D</sub>	-
Provision of open space for artistic performances	I <sub>w</sub> , I <sub>D</sub> , I <sub>C</sub>	I <sub>w</sub> , I <sub>D</sub>	-	-	-	-
Improvement of public safety	I <sub>w</sub> , O <sub>w</sub> , G <sub>D</sub> , I <sub>D</sub>	I <sub>w</sub> , G <sub>D</sub> , I <sub>D</sub> , O <sub>w</sub>	O <sub>w</sub> , C <sub>D</sub> , I <sub>D</sub>	C <sub>D</sub> , I <sub>D</sub> , O <sub>D</sub>	-	-
Improvement of accessibility	I <sub>w</sub> , I <sub>D</sub>	I <sub>w</sub> , I <sub>D</sub>	I <sub>D</sub>	I <sub>D</sub>	I <sub>D</sub>	I <sub>D</sub>
<b>Recreational water sports</b>						
Provision of opportunities for swimming	-	-	-	I <sub>D</sub> , I <sub>C</sub>	-	-
Provision of opportunities for angling	-	-	-	I <sub>D</sub> , I <sub>C</sub>	-	-
Provision of opportunities for kayaking	-	C <sub>C</sub>	-	-	-	-
Provision of opportunities for recreational boating	-	-	-	-	-	-
<b>Recreational land use</b>						
Provision of opportunities for hiking	-	-	I <sub>D</sub> , I <sub>C</sub>	I <sub>D</sub> , I <sub>C</sub>	I <sub>C</sub> , T <sub>R</sub>	I <sub>D</sub> , I <sub>C</sub> , T <sub>R</sub>
Provision of opportunities for cycling	I <sub>w</sub> , I <sub>D</sub> , I <sub>C</sub>	I <sub>w</sub> , I <sub>D</sub>	I <sub>w</sub> , I <sub>D</sub> , I <sub>C</sub> , I <sub>R</sub>	I <sub>D</sub> , I <sub>C</sub> , I <sub>R</sub>	I <sub>C</sub> , T <sub>R</sub>	I <sub>D</sub> , I <sub>C</sub> , T <sub>R</sub>
Provision of opportunities for playing	I <sub>w</sub> , O <sub>w</sub> , I <sub>D</sub>	I <sub>w</sub> , O <sub>w</sub> , I <sub>D</sub>	I <sub>w</sub> , I <sub>D</sub>	I <sub>D</sub> , I <sub>C</sub> , I <sub>R</sub>	I <sub>D</sub>	I <sub>D</sub>
Provision of opportunities for walking dogs	I <sub>w</sub> , O <sub>w</sub> , I <sub>D</sub> , I <sub>C</sub>	I <sub>w</sub> , O <sub>w</sub> , I <sub>D</sub>	I <sub>w</sub> , I <sub>D</sub>	I <sub>D</sub> , I <sub>C</sub>	I <sub>D</sub>	I <sub>D</sub> , I <sub>C</sub>

What all pilot actions have in common is that they aim at improving the quality of urban space and hence, the quality of life. All the listed benefits contribute to strengthening soft location factors and to the creation of business opportunities. Thus, they lead to an improvement of the cities' attractiveness and competitiveness. Thereby, the revitalisation of urban river spaces can produce financial benefits, such as increased municipal revenues from direct and indirect taxes and fees, permits and levies. Therefore, these overall benefits are not specifically highlighted in Table 3.3-6.

In consultation with the six REURIS partners, the main economic benefits expected from the pilot action investments and their importance for different beneficiary groups have been identified in Table 3.3-6 and can be summarised as follows.

The **main ecosystem services** on which all pilot actions focus imply the provision of:

- open spaces inviting users to stop and enjoy,
- biodiversity conservation and enhancement,
- green tracks for non-motorised commuters,
- an attractive residential environment,
- opportunities for cycling, and
- opportunities for walking dogs.

Thus, the main economic benefits which are expected from the pilot actions are firstly improvement to social cohesion and recreational land use, and secondly the improvement of bequest and existence values and of business opportunities.

The main beneficiaries of the pilot action investments will be the **inhabitants of the city districts** where the pilot actions are located. In all six pilot actions they are expected to benefit mainly from:

- conservation of and increases in river-related aesthetic features,
- open space inviting users to stop and enjoy,
- an attractive residential environment,
- improved accessibility,
- opportunities for playing, and
- opportunities for walking dogs.

Due to their small size, the impacts of the pilot action investments have a rather limited geographical dimension. None of them is expected to generate benefits for:

- property owners outside the districts where the pilot actions are located,
- companies and governmental institutions outside the city, and
- inhabitants and tourists outside the region.

To summarise, Table 3.3-6 shows that all the pilot actions are targeted at similar benefits. They have in common that provisioning services are irrelevant. This can be explained by the urban setting (cf. Everard et al., 2011). Instead, the focus is on regulatory and cultural services with a rather limited spatial dimension.

### 3.3.4 Cost-benefit analysis

Cost-benefit analysis differs from other valuation techniques such as cost-effectiveness analysis and multi-criteria analysis in that it is the only one measuring costs and benefits in the same unit (cf. Pearce et al., 2006: 35). Thurston et al. (2009) specify five essential steps to every cost-benefit analysis (ibid: 7f.):

- Definition of the project  
*This comprises the delineation of the project area, which should be as accurate as possible because it is the foundation for the provision of reliable results during the following steps of the cost-benefit analysis. The delineation should include not only the geographic scale, but also demographic aspects as well as the time frame.*
- Identification of the project impacts  
*This means that both positive and negative impacts of the river revitalisation project need to be exposed.*
- Quantification of the impacts  
*Before the project will be valued in the following step, it is necessary to know as many details as possible about the implications of the river revitalisation project, e.g., it is not enough to state that a project improves flood protection in general, but the percentage by which the water retention capacity will be enhanced and the consequences for fish species or neighbouring properties must be determined.*
- Estimation of costs and benefits  
*Details concerning the determination of costs and benefits are treated in chapters 3.3.1 and 3.3.2.*
- Discounting  
*The calculation must factor in the fact that costs and benefits emerge at different project stages. While costs occur normally at the moment when the investment is made, benefits are often enjoyed later, especially in renaturation projects because it takes time for the habitats to regenerate. This difference must be observed as it necessitates adapting the time value of money in the measurement of peoples' preferences. Depending on the region where the object of investigation is located, the European Commission (2008) recommends real social discount rates of between 3.5% and 5.5% (ibid: 16).*

It is difficult to determine the time horizon of a project during which the benefits will continue because it cannot be foreseen clearly when preferences and habits will change. Nevertheless it is useful to fix a future point in time when the project impacts are assumed to end. For projects in the water and environment sector, the European Commission currently recommends 30 years as a time horizon “when all the assets and all the liabilities are virtually liquidated simultaneously” (European Commission, 2008: 37). This can serve as a benchmark, but based on project-specific conditions, decision makers can choose another time horizon deviating from this reference proposal. Furthermore, different time horizons should be assumed for the different kinds of costs which are listed in chapter 3.3.1 because some costs, such as planning costs, occur only at the beginning of the project while others such as maintenance costs are relevant for the duration of the project. There is uncertainty in cost-benefit analysis, because it is based on assumptions on the future development of different parameters, such as the discount rate and the time horizon. Therefore, it is recommended that every cost-benefit analysis should be subject to a sensitivity analysis, i.e. there should be a test of how the benefits react if different values are used for the uncertain parameters. If the results stay the same, the cost-benefit is assumed to be robust. If the results change, the adequacy of the used values should be assessed (cf. Pearce et al., 2006: 60f.).

It can be very helpful to expand a traditional cost-benefit analysis by equity aspects. This means there should be an analysis of how the costs and the benefits are distributed among different groups, such as income groups, geographically located groups or businesses and consumers (ibid: 61).

In accordance with Thurston et al. (2009) and other publications, it can be summarised that even if cost-benefit analysis is not always exact, it is able to identify costs or benefits which would have been otherwise neglected.

In Stuttgart, 18 projects were subject to a cost-benefit analysis as a first approach to this issue and in order to raise awareness of the aspects that generate economic value of revitalisation projects. It was conducted by the Institut für Landes- und Stadtentwicklungsforschung Dortmund.



## 3.4 Transnationally valid recommendations

Resulting from the experiences and findings in the context of the REURIS project, the following transnationally valid recommendations for financial and economic issues have been elaborated. All have in common that they emphasise how important farsighted financial and economic planning is.

### 3.4.1 Scheme of financial and economic analysis

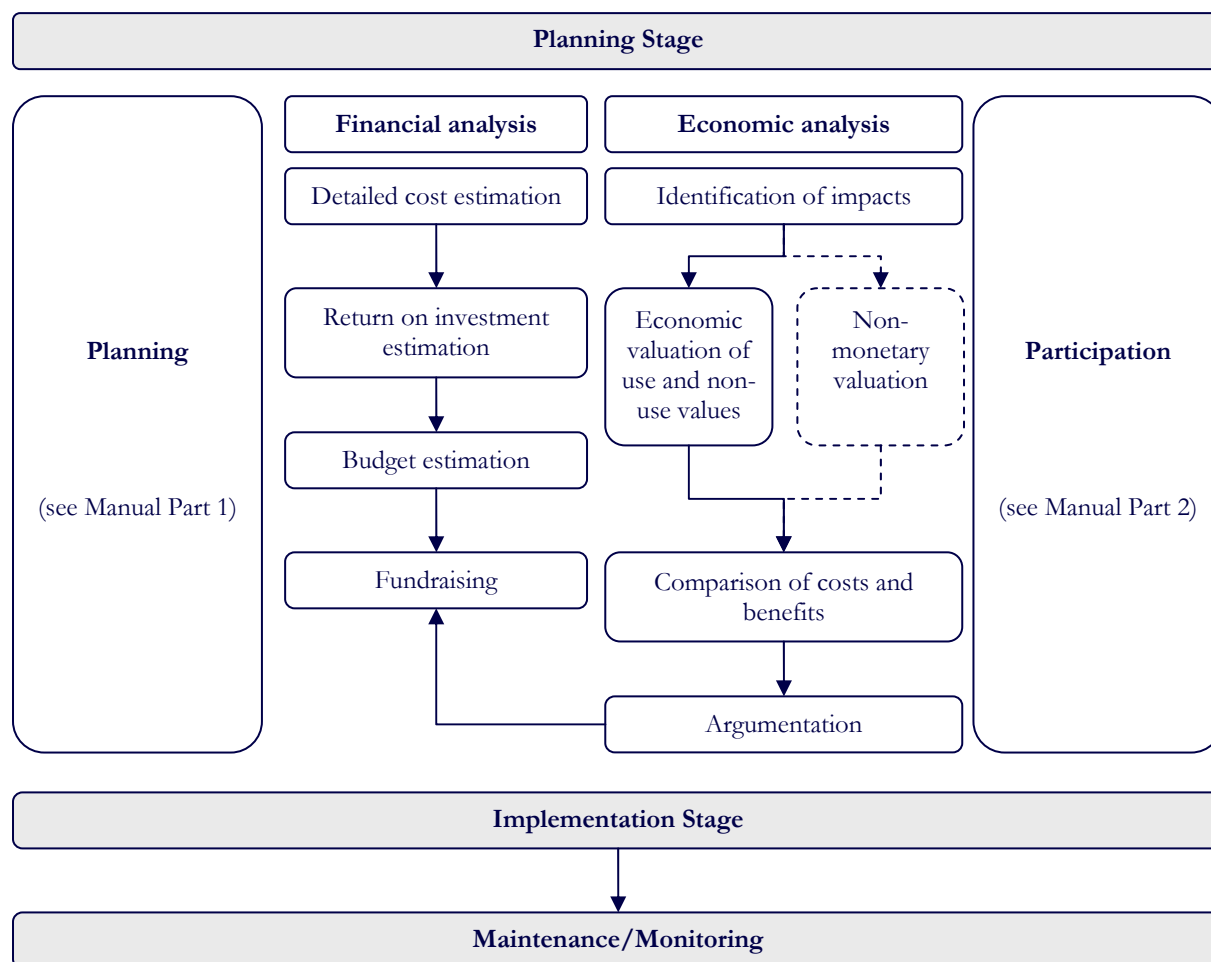


Figure 3.4-1: Scheme of financial and economic analysis (© REURIS project team).

---

## 3.4.2 Recommendations

### Financing options

- Be creative in order to find adequate co-financing. As the municipal budget is characterised by fundamental restrictions in many places, successful fund-raising requires many good ideas.
- Tap as many funding sources as possible. Even if it is complicated, accepting many small financial contributions and combining them can lead to faster implementation than waiting for the “big fish”.
- Divide large projects into separate small construction sections. It is very difficult to ensure sufficient funding to implement the whole project at one time. In contrast, smaller construction sections can be financed by smaller grants which can be much more easily obtained. In addition, it is very helpful for further fund-raising when there are already some successfully implemented sections to be shown.
- Do not concentrate on obtaining financial resources for one specific topic only. On the one hand, it is important to ensure that the aims of the project (e.g., nature protection, flood prevention, urban design) conform to the aims of the sponsors. However, urban river revitalisation projects usually have multiple aims at the same time. Therefore, different support options should be considered and then it should be decided where the best chances for receiving a grant lie.
- Update your overview of financing options regularly. Especially with regard to public grants, it is important to be up-to-date, because programming periods are temporally limited, and subsidy programmes, conditions and combination possibilities change frequently.
- If you want to apply for a support programme which requires co-financing, ensure the availability of co-financing funds at an early stage. Sometimes it may be possible to find a foundation or another institution willing to provide this co-financing.
- Prepare an easily understandable description of the aims and the background of the project. A detailed breakdown of the different benefits provided by the river revitalisation project can be persuasive to potential sponsors.
- Check the possibility of involving stakeholders who benefit from the river revitalisation. It may happen that the legal framework allows the financial involvement of private beneficiaries, but perhaps this option has never been utilised because nobody was aware of it.
- Cooperate with external partners who support the project. With regard to the complexity of the search for sufficient financial resources, the skills and also the availability of staff play a major role. If the municipality does not have enough means to ensure funding, it may be helpful to involve external institutions.

### River revitalisation costs

- Try to consider the costs as completely as possible in order to avoid miscalculation.
- Budget enough funding to allow for good planning and maintenance. A river revitalisation project can be sustainable only if the investment is well prepared during the planning phase and if future maintenance is assured.
- Try to reduce maintenance costs. Maintenance costs can get expensive and are often not taken into account at the start of a project. Sometimes it can be possible to share the costs with benefiting users (e.g. companies) or by involving third parties (e.g. leasing grassland to farmers).
- Factor in enough funding to cover unforeseen minor and major changes during the construction work. A river revitalisation project, especially if it is innovative, may require changes, such as in defining materials which should be used for construction work or for the disposal of unforeseeable contamination or even blind shells. .
- Calculate enough funding to provide adequate resources for public participation. Manual Part 2 has shown that public participation is time-consuming, but useful.

---

## River revitalisation benefits

- Communicate the positive impacts of your river revitalisation project and focus not only on the improvement of the ecological status, but also the environmental impacts on human well-being. This helps to build public support.
- Describe the benefits of the river revitalisation project as completely as possible and do not assume that benefits which are self-evident to you are also easily recognised by external stakeholders.
- Try to distinguish the multiple benefits and ecosystem services in order to avoid double counting.
- Choose a valuation method in relation to the aims of the study since different decision settings require different degrees of accuracy. A valuation which is supposed to back a policy decision requires a more careful examination than one which leads only to a first screening.
- Budget enough time and funding for conducting an economic valuation study including the quantification of the benefits in monetary terms. This makes it possible to compare the benefits of the river revitalisation with its costs, and it shows who benefits.
- If project resources are not sufficient for a monetisation study, try to quantify the benefits with the help of indicators or make use of the benefits transfer.
- If you decide for a benefits transfer, interpret the results of the study with caution and check whether the site-specific spatial context including the biophysical structure of the ecosystem and the socio-economic background of the respondents has been adequately considered.

### 3.5 References

- Amigues, J.-P.; Boulatoff, C.; Desaignes, B.; Gauthier, C.; Keith, J. (2002): The benefits and costs of riparian analysis habitat preservation: a willingness to accept/willingness to pay contingent valuation approach. *Ecological Economics*, 43: 1, 17-31.
- Birol, E.; Hanley, N.; Koundouri, P.; Kountouris, Y. (2007): The optimal management of wetlands: quantifying trade-offs between flood risks, recreation and biodiversity conservation. *Environmental Economy and Policy Research Working Papers No 28.2007*. University of Cambridge, Department of Land Economy.
- Boyd, J.; Banzhaf, S. (2007): What are ecosystem services? The need for standardized environmental accounting units. In: *Ecological Economics*, 63: 2-3, 616-626.
- Bräuer, I.; Marggraf, R. (2004): Valuation of ecosystem services provided by biodiversity conservation: an integrated hydrological and economic model to value the enhanced nitrogen retention in renaturated streams. FEEM Working Paper No. 54.04. Available at: <http://ssrn.com/abstract=541106>.
- Brookshire, D. (1992): Issues regarding benefits transfer. Paper presented at the Association of Environmental and Resource Economics Workshop, Utah, June 1992.
- Brouwer, R.; van Ek, R. (2004): Integrated ecological, economic and social impact assessment of alternative flood control policies in the Netherlands. *Ecological Economics*, 50: 1, 1-21.
- Ciszewska, K. (1997): Zastosowanie metody wyceny warunkowej do oszacowania wartości ekonomicznej środowiska na przykładzie bagien biebrzańskich. Master Thesis, University of Warsaw.
- Costanza, R. (2000): Social goals and the valuation of ecosystem services. In: *Ecosystems*, 3: 1, 4-10.
- Costanza, R.; d'Arge, R.; de Groot, R.; Farber, S.; Grasso, M.; Hannon, B. et al. (1997): The value of the world's ecosystem services and natural capital. In: *Nature*, 387: 6630, 253-260.
- De Groot, R.; Wilson, M.; Boumans, R. (2002): A typology for the classification, description and valuation of ecosystem functions, goods and services. In: *Ecological Economics*, 41: 3, 393-408.
- Dubgaard, A.; Kallesøe, M.; Ladenburg, J.; Petersen, M. (2005): Cost-benefit analysis of river restoration in Denmark. In: Brouwer, R.; Pearce, D. (Ed.): *Cost-benefit analysis and water resources management*. Edward Elgar. Cheltenham.
- European Commission, DG Regional Policy (2008): Guide to Cost-benefit analysis of investment projects. Structural Funds, Cohesion Fund and Instrument for Pre-Accession, Brussels.
- European Parliament (2000): Directive 2000/60/EC of the European Parliament and of the Council establishing a framework for the Community action in the field of water policy. In: *Official Journal of the European Communities L327*, 22.12.2000.
- Everard, M. (2011): Why does “good ecological status” matter? In: *Water and Environment Journal*, Published online: 6 June 2011. DOI 10.1111/j.1747-6593.2011.00273.x.
- Everard, M.; Moggridge, H. (2011): Rediscovering the value of urban rivers. In: *Urban Ecosystems*. Published online: 19 April 2011. DOI 10.1007/s11252-011-0174-7.
- Everard, M.; Shuker, L.; Gurnell, A. (2011): The Mayes Brook restoration in Mayesbrook Park, East London: an ecosystem services assessment. Environment Agency Report, Bristol.
- Farber, S.; Costanza, R.; Wilson, M. (2002): Economic and ecological concepts for valuing ecosystem services. In: *Ecological Economics*, 41: 3, 375-392.
- Fisher, B.; Turner, R. (2008): Ecosystem services: classification for valuation. In: *Biological Conservation*, 141: 5, 1167-1169.

- 
- Georgiou, S.; Bateman, I.; Cole, M.; Hadley, D. (2000): Contingent ranking and valuation of water quality improvements. CSERGE discussion paper 2000-18, University of East Anglia.
- Green, C.; Tunstall, S. (1991): The evaluation of river water improvements by the contingent valuation method. *Applied Economics*, 23: 7, 1135-1146.
- Hanley, N.; Colombo, S.; Tinch, D.; Black, A.; Aftab, A. (2006): Estimating the benefits of water quality improvements under the Water Framework Directive: are benefits transferable? *European Review of Agricultural Economics*, 33: 3, 391-413.
- Hanley, N.; Wright, R.; Alvarez-Farizo, B. (2006): Estimating the economic value of improvements in river ecology using choice experiments: an application to the water framework directive. *Journal of Environmental Management*, 78: 2, 183-193.
- Hassan, R.; Scholes, R.; Ash, N. (2005): *Ecosystems and human well-being. Current state and trends.* Washington, DC: Island Press (Millennium ecosystem assessment series, 1).
- Hynes, S.; Hanley, N. (2006): Preservation versus development on Irish rivers: whitewater kayaking and hydro-power in Ireland. *Land Use Policy*, 23: 2, 170-180.
- Jílková, J.; Holländer, R.; Kochmann, L.; Slavík, J.; Slavíková, L. (2010): Economic Valuation of Environmental Resources and its Use in Local Policy Decision-Making: A Comparative Czech-German Border Study. *Journal of Comparative Policy Analysis*, 12: 3, 299-309.
- Johnstone, C.; Markandya, A. (2006): Valuing river characteristics using combined site choice and participation travel cost models. *Journal of Environmental Management*, 80: 3, 237-247.
- Kölbel, J. (2010): The value of urban river bathing: a contingent valuation study. Master Thesis, University of Oxford, School of Geography and the Environment.
- Kosz, M. (1996): Valuing riverside wetlands: the case of the "Donau-Auen" national park. *Ecological Economics*, 16: 2, 109-127.
- Meyerhoff, J.; Dehnhardt, A. (2007): The European Water Framework Directive and economic valuation of wetlands: the restoration of floodplains along the river Elbe. *European Environment*, 17: 1, 18-36.
- Meyerhoff, J.; Dehnhardt, A.; Hartje, V. (2010): Take your swimsuit along: the value of improving urban bathing sites in the metropolitan area of Berlin. *Journal of Environmental Planning and Management*, 53: 1, 107-124.
- Morse-Jones, S.; Turner, R.; Fisher, B.; Luisetti, T. (2010): Ecosystem valuation. Some principles and a partial application (CSERGE Working Paper, EDM-2010-01). Available online at: [http://www.uea.ac.uk/env/cserge/pub/wp/edm/edm\\_2010\\_01.pdf](http://www.uea.ac.uk/env/cserge/pub/wp/edm/edm_2010_01.pdf), checked on 11/01/2011.
- O'Gorman, S.; Bann, C.; Caldwell, V. (2010): The benefits of inland waterways. Final report by Jacobs to Defra/IWAC. 2<sup>nd</sup> ed. Available online at: [http://www.iwac.org.uk/downloads/research/OGorman\\_et\\_al\\_2010\\_The\\_Benefits\\_of\\_Inland\\_Waterways\\_Phase\\_1\\_2nd\\_Edition\\_March2010.pdf](http://www.iwac.org.uk/downloads/research/OGorman_et_al_2010_The_Benefits_of_Inland_Waterways_Phase_1_2nd_Edition_March2010.pdf), checked on 31/01/2011.
- Pearce, D.; Atkinson, G.; Mourato, S. (2006): *Cost-benefit analysis and the environment. Recent developments.* Paris, OECD Publishing.
- Schwarzwälder, B.; Arnold, M.; Beer-Tóth, K.; Baumgart, K. (2010): Added value of near-natural streams: Willingness to pay for river revitalisation projects in Switzerland. *Natur und Landschaft*, 85: 8, 329-333.
- Spash, C.; Hanley, N. (1995): Preferences, information and biodiversity. In: *Ecological Economics*, 12: 3, 191-208.
-



Thurston, H.; Heberling, M.; Schrecongost, A. (2009): Introduction to economic jargon and decision tools. In: Thurston, H.; Heberling, M.; Schrecongost, A. (Eds.): Environmental economics for watershed restoration. Boca Raton, Fla.: CRC Press, 1-13.

Young, R. (2005): Determining the economic value of water. Concepts and methods. Washington, DC: Resources for the Future.