

# **Making the Structural and Cohesion Funds Water-Positive**

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## **Preface**

Water, together with energy and soil, is one of our most precious natural resources, and of increasing importance for the functioning of our economies. Water is, of course, essential for life, nature and the environment. It enhances the attractiveness of our landscapes and increases the competitiveness of our regional economies. Measures taken in recent decades to protect and improve the aquatic environment have borne fruit. However, in large part because of the impact of climate change, water resources are coming under increasing pressure, more in some areas than in others, which means that we must make continued and even increased efforts to face current and future challenges.

The sustainable management of resources and stronger synergies between environmental protection and growth are guiding principles of the renewed Lisbon strategy and the Gothenburg Action Plan, which are part of the wider objective of sustainable development.

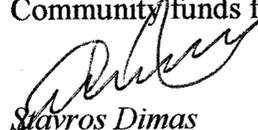
The preparation of strategies and programmes under the new Cohesion Policy for 2007-13 is an important opportunity for the regions to ensure support for the sustainable use of water resources as part of their efforts to develop synergies between the three dimensions of sustainable development. This will guarantee supplies of water for domestic, industrial and other activities. It will also help mitigate the risks of floods and droughts, and support a range of uses like navigation, hydropower and recreation, and the jobs associated with them.

Already in the past, Cohesion Policy measures have given significant support in particular to the creation of water supply or waste water treatment facilities.

With the development of the Water Framework Directive and the EU initiative on flood risk management, challenging new tasks lie ahead of us. Because water ignores boundaries and because 80% of our river basin catchments are international, most of these tasks can only be met if we work together across boundaries in a European context. So water management is also a perfect “case study” in the implementation of the new channels of co-operation between the Regions and the Member States.

The attached “*Mainz Declaration*”, endorsed by the participants at the International Conference on Flood Risk Management and Multifunctional Land Use in River Catchments, held in Mainz, Germany, from 17 to 19 October 2005, is an illustration of successful co-operation among European partners.

I hope that this guidance document, prepared by the water and cohesion policy experts of the Member States, will serve as a useful tool for spreading information and raising the awareness of all those directly involved in planning and decision-making for the new generation of Community funds for 2007-2010.



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# **Making the Structural and Cohesion Funds Water-Positive**

**Water is vital for the competitiveness, attractiveness and quality of life of the regions of the EU. The Cohesion and Structural Funds can be used effectively to enhance environmental protection across the Union and to support implementation of the Water Framework Directive and other water policies.**

## **Water and the Lisbon Agenda**

EU Member States and regions face social, economic and environmental challenges. To meet these challenges, and to achieve the objectives of the renewed Lisbon Agenda, all available resources have to be mobilised. The economic, social and environmental aspects of the EU Sustainable Development Strategy have to be integrated and synergies exploited. Water as a natural resource plays an essential role in achieving these policy objectives.

***“Well thought-out environmental policies provide opportunities for innovation, create new markets and increase competitiveness through greater resource efficiency and new investment opportunities”***

*Lisbon Strategy, March 2000*

***“The challenges facing Europe’s society, economy and environment are surmountable. If managed well, they can be turned into new opportunities for Europe to grow and create more jobs.”***

*The Community Lisbon Programme, July 2005*

This document has been drafted by a working group set up by the European Network of Environmental Authorities (ENEA). The Network is a group of experts from Member States supported by two Directorates-General of the EU Commission: Environment and Regional Policy.

Contributions came mainly from experts working with, or for, the national administrations. They work in regional funding policy and the water sector and are familiar with the implementation of water policies such as the Water Framework Directive (WFD) and with EU regional funding programmes. The document incorporates comments from the national Water Directors and the Commission.

The document aims to help integrate sustainable water management into regional development programmes. It gives an overview of future funding needs and opportunities relating to water for the period 2007-2013, as described in the Cohesion Policy.

It explains:

- **Why** water-related investment supports the aims of Cohesion Policy
- **How** funds might be made water-positive
- **What** types of measures, activities and investments might be supported and what are their benefits.

The document is targeted primarily at those responsible for designing strategy and programmes for the new generation of Cohesion and Structural funds, particularly at regional and municipal levels.



River Catchments of Europe, Source: European Joint Research Centre

# 1. THE IMPORTANCE OF WATER

## ***Availability of Water***

Availability of water in sufficient quantity and of good quality is a concern across the EU. Quality is affected by human activities, including agriculture and industry, increased hydropower and additional capital investment in roads and infrastructure. The effects include diffuse and point pollution, sedimentation, increased nutrient leaching, and significant rises in water temperature. Key problems are the discharge or disposal of waste and wastewater.

Protecting the marine environment is also crucial. Freshwater quality problems have a considerable impact on estuary and marine ecosystems, and this has to be reduced.

Measures need to be taken to achieve sustainable abstraction of water for human use, and to secure adequate supply of water.

These are the challenges the EU has to address in the near future.

## ***Risks***

The water resources in several European regions are increasingly at risk. The progressive occurrence of extreme weather conditions sets new limits on development and growth. Development patterns need to be kept under review so they stay compatible with what is needed for regional sustainable development. Non-action will lead to increasing costs in terms of damage from heat waves, storms and floods, all of which will become more frequent in the coming decades.

### *The economic consequences of floods*

*Between 1998 and 2002, Europe suffered over 100 major floods, including catastrophic floods along the Danube and Elbe in 2002. Since 1998, floods have caused some deaths, the displacement of about half a million people, and at least € 25 billion in insured economic losses.*

## ***Flood and Drought Risk Management***

Increased flood and drought risk is of major concern for Member States. Taking an integrated approach to river and flood management can reduce the need for flood defences and make use of natural protection from flood and preventing droughts. The flood plains and wetlands of a river basin are particularly important for maintaining its proper function, and retaining nutrients, recharging groundwater and sustaining recreation, tourism and biodiversity. Land-use planning and water-saving investment are just two of a whole series of elements important for future drought risk management.

Structural and Cohesion Funds offer considerable scope for supporting integrated water management, including floods and droughts, and finding effective solutions through trans-national cooperation.

## 2. POLICY CONTEXT

The two policy areas which the handbook deals with, i.e. EU Cohesion Policy and EU Water Policy, have a number of principles and objectives in common and can benefit from each other if considered together.

**Cohesion Policy** aims primarily to make regions fit for future challenges. Socio-economic disparities need to be reduced, the potential of economic development strengthened, and the capacities of the social and economic governance systems developed in order to enable regions to respond to change efficiently and to mobilise their strengths to promote sustainable and more balanced development to the benefit of all.

**Water Policy** addresses the need to protect Community waters in qualitative and quantitative terms. It enshrines policies and legislation dealing with water-related issues, including the impacts of climate change. The success of Water Policy is a determining factor for a region's attractiveness and competitiveness.

In the context of the three dimensions of sustainable development (economic, social and environmental), it is essential to mobilise national and Community resources, including the two funding instruments of Cohesion Policy - the European Regional and Development Fund (ERDF) and the Cohesion Fund – and the European Social Fund for employment promotion. Together these can work to support the Lisbon Strategy objectives.

### ***The Link between Water and Cohesion Policy***

The primary objectives of the renewed Lisbon Strategy – more jobs and economic development - go hand in hand with the promotion of social and environmental objectives.

The EU Member States have repeatedly underlined the important contribution of environment policy to growth and employment, and to the quality of life of their citizens. Sustainable management of natural resources, which includes water management, can play a major role in creating new outlets and jobs, and thus help to overcome regional disparities and strengthen competitiveness.

Because of their complexity and – in many cases – cross-boundary dimensions, it is important that these policies are brought forward at the regional and local community levels and looked at in an integrated way so that they combine sector-specific and territorial aspects.

The European Union's regions have a key role to play in re-launching the Lisbon strategy. The Cohesion Policy provides funding for anticipating changes and helping regions to deal with challenges proactively and co-operate across frontiers. The launch of the renewed Lisbon strategy and the new Cohesion Policy 2007-2013 are an

important opportunity for the regions to promote Water Policy development via national and regional development strategies and programmes. Combining these policies will also make it much easier to achieve other longer-term employment and growth objectives in an environmentally-sensitive way.

**Cohesion Policy** includes rules on the use of the European Regional and Development Fund (ERDF) and the Cohesion Fund that support EU Water Policy in many respects. Cohesion Policy is about raising the long-term growth potential of regions, enabling them to attain a higher level of sustainable development. This in turn supports investment in competitive growth and jobs in line with the Lisbon Strategy.

**Water Policy** covers all the policies and legislation dealing with water-related issues. Many key water issues need the Cohesion Policy principles to be successfully implemented. These principles include trans-national co-operation, where the competent authorities work together across borders, for example, in a river basin.

It is important that the Cohesion and Water policies are considered together if success is to be achieved. Their implementation guidelines and timescales may differ slightly, but they offer enormous opportunities for funding many of the desired results of Water Policy by integrating them with Cohesion Policy. Thus in the past the water infrastructure required under the Drinking Water and Urban Waste Water Treatment Directives was largely co-financed by the Cohesion policy.

## ***Cohesion Policy***

Cohesion Policy aims to help those regions lagging behind or facing structural difficulties in achieving sustainable development. It can help create sustainable communities by ensuring that economic, social and environmental issues are tackled through integrated strategies for renewal, regeneration and development.

The funds that will support cohesion policy for 2007-2013 are the two Structural Funds – the European Development Fund (ERDF) and the European Social Fund (ESF) – and the Cohesion Fund.

These funds target different types of projects and are used for regionally identified issues in different countries and regions in. The Structural Funds apply to the specific regions and areas which suffer from the greatest economic deprivation, while Cohesion Funds apply to whole countries. The measures supported under these funds are also supposed to tie in with Community water policies and can thus be made more “water-positive”.

For rural development areas, the **European Agricultural Fund for Rural Development** (EAFRD) is important for funding measures relevant to the environment. Implementation of the WFD is an explicit goal of the Fund and offers much scope for projects related to water, but to benefit from the scheme, the Member State or region must first prepare a special Rural Development Programme.

The national strategic frameworks show how these three funds (ERDF, ESF and Cohesion Fund), plus the EAFRD and the new European Fisheries Fund (EFF), complement each other and ensure optimal use of the funds to create synergies.

## ***Water Policy***

Water Policy at European level and, in particular, in the Water Framework Directive (WFD), aims at an integrated approach to water management at river basin level, and this includes consultation with all stakeholders.

This is based on the understanding of the natural functioning of freshwater and coastal ecosystems, which provide water and other water services. Protecting and improving the aquatic environment will help ensure enough water for drinking, irrigation, industry and other uses, serving as an essential foundation for each region's economic prosperity and social cohesion.

The WFD has a significant impact on how water resources are and will be managed. It takes a holistic forward-looking approach to pan-EU water management by using Integrated River Basin Management Plans. As rivers do not respect national borders, Integrated River Basin Management needs international cooperation.

The WFD is not only an umbrella that covers the Community policies of the "old" water directives. It goes beyond the individual requirements of those to establish a framework for the protection of surface and ground waters throughout the EU. It interlinks directives like the Urban Waste Water Treatment Directive, the Directive on Drinking Water, the Directive on Bathing Water, the Nitrates Directive and the Directive on Integrated Pollution Prevention and Control (IPPC). The measures necessary under those directives are part of WFD implementation and are considered to be the "basic measures" of the integrated river basin management plans.

The WFD sets a legal framework for all water-related activities, land use and development planning at river basin level. This is relevant for the strategic planning processes in implementing the Cohesion Policy at regional level. Improved governance is one of the accompanying actions by which Cohesion Policy will support the Lisbon priorities. Good governance is also an essential element of the WFD, which calls for efficient management structures, co-operation and partnership including the consultation and active involvement of the public.

The WFD has some aspects in common with the Structural Funds programmes of the Cohesion Policy:

- a clear and cross-sectoral planning framework as a basis for measures aimed at sustainable water management;
- greater public participation by citizens and stakeholders;
- cost efficiency, cost-recovery of water investment and services, and applying the "polluter pays" principles (e.g. in water pricing);
- promotion of competence and partnership, and establishing structures between institutions, regions and across borders.

### **3. ACCESSING AND PROOFING STRUCTURAL AND COHESION FUNDS**

This part of the document shows how Structural and Cohesion Funds can be used to deal with threats relating to water, and unlock the potential benefits in order to make funds water-positive.

#### ***Establishing a Strategic Framework***

The proposed Community Strategic Guidelines 2007-2013 identify EU priorities for Cohesion Policy. The Guidelines are targeted to support growth and jobs, and aim to strengthen the links between environmental protection and economic growth.

Once the final budgets for the structural funds, the legislative package and the Community Strategic Guidelines have been adopted, National Strategic Reference Frameworks (NSRF), containing national and regional development plans, are prepared by the Member States. These set out the strategy developed in partnership between the countries for 2007-2013 and will incorporate lists of operational programmes.

The NSRF explain how the Community Funds will be used and how they will generate additional social, economic or environmental benefits. These measures could include infrastructure projects, educational or interpretative initiatives, and advisory services.

Within the strategic framework, investment in water infrastructure, water management, management of flood and drought risk, the promotion of clean technologies, and the rehabilitation of contaminated sites will both create attractive conditions for business and improve water resources.

It is therefore necessary to ensure that Water Policy issues are integrated at this important strategic planning stage, because it establishes the reference for operational programmes and any projects or initiatives.

#### ***Building an Operational Programme***

When drafting an operational programme due consideration must be given to integration of the Water Policy dimension through the following steps:

- A **territorial analysis** has to be made of the social, economic and environmental state of the area in question. This analysis highlights the area's strengths, weaknesses, threats and opportunities, including with respect to water.
- A **regional strategy** has to be established with clear objectives and supporting measures that will be funded by the Structural Funds. This strategy should focus on clear priorities with measurable outcomes.

**“Ex-ante” evaluations** – made before any decision is taken – play a key role in linking these two steps in a consistent way, and are thus of major support in decision-making. Ex-ante evaluations aim to forecast the results of the regional strategy. They also help to clarify the goals; to check whether the operational programme follows its objectives; and to provide a way of amending the framework if needed.

## ***Operational Programmes and River Basin Management Plans***

Operational programmes and the River Basin Management Plans (RBMP) for the same regional territory can usefully cross-fertilise. An operational programme can include water-positive measures – but conversely, if no precautions are taken, could also promote water-negative projects.

The results of river basin management plans could substantially boost economic development, especially in areas where sustainable water resources management or environmental quality are major constraints.

Promotion of water-positive measures requires close(r) co-operation between the competent planning authorities for Structural and Cohesion Funds and the water authorities in Member States and regions. Both groups of authorities have the opportunity to implement complementary programmes with very close links between water and economic development. Therefore, the success of operational programmes relies on partnership at all levels including the cross-border and cross-regional dimension.

Practical ways of strengthening co-operation between competent authorities include:

- Use of the information available on water– such as flood risk maps and “WFD Article 5 reports” – in preparing the territorial analysis and ex-ante evaluations for operational programmes. This should reduce the risk of water-negative measures and could promote relevant actions for water management.
- Recourse to committees and public participation processes, both of which are suggested for operational programmes and for the river basin management plans. These should ensure fair representation of the authorities responsible for water and regional policy and of stakeholders.
- The commitment of water experts and the authorities from neighbouring water regions and their involvement in the planning process are determining factors for a successful cross-sectoral approach, interlinking fund allocation, development policies, land-use plans, regional environmental programmes, re-afforestation strategies, plans for nature protection areas, integrated coastal management, etc.

## ***Project Development***

Once the Operational Programmes have been agreed, project proposals are prepared for EU funding. As eligible projects receive a variable share of EU funding it is important to secure sufficient national co-financing from public or private sources in time.

In conclusion, involving water experts in preparing and submitting bids can produce close partnerships and substantial results.

For projects on water and environment, specific consideration needs to be given to the following aspects.

- Ensuring consistency with WFD requirements through appropriate selection mechanisms to prevent economic development projects from unfavorably affecting water policy objectives.
- The need to undertake environmental impact assessments (EIA) for infrastructure projects that risk damaging the status of water resources. This is to ensure either that damage is prevented or that the project meets some very restrictive WFD requirements that would allow it to go ahead, including mitigation of the damage. Projects can benefit from early and close co-operation with the competent water authorities.
- The need to take into account the principle of Cost Recovery for water services and application of the Polluter Pays Principle as required by the WFD. During the preparation and implementation of Cohesion-funded plans and infrastructure projects, due attention should be paid to cost allocation between different uses (domestic, industry and agriculture), adequate pricing policies, and tariff structures that include costs of replacement, operation and maintenance. Possible exceptions on grounds of social, economic, geographical, or specific uses would need to be justified.
- Supplementing actions for water improvement with measures which have indirect benefits for the water sector. Effective co-operation between all interested actors and stakeholders can generate projects at little extra cost, such as regeneration programmes, education and training or exchanges of experience and good practice.
- The advantages the WFD (Annex III) planning process offers to accelerate and improve the preparation and selection of projects for EU co-funding. Planning under the WFD requires analysis and comparison of the effectiveness and efficiency of interventions prior to their submission for funding. River Basin Management Plans for example need to incorporate a combination of co-ordinated and cost-effective measures to achieve WFD objectives. Their effectiveness yields then results in a series of conditions favorable for regional sustainable development.

## ***Funding Opportunities***

The type of funding possible for environmental action depends on which of the three Cohesion Policy objectives (for 2007–2013) a project comes into. Priorities for each objective are as follows:

- ***Convergence***: To stimulate growth potential by focusing on the investment and collective services needed for long-term competitiveness. Massive investment in water infrastructure is still required to upgrade and extend water supply and sanitation systems to the new Member States and candidate countries for 2007-13.
- ***Regional competitiveness and employment***: To anticipate and promote economic change by improving competitiveness and attractiveness, mainly through investment in the knowledge economy, innovation, adaptability of enterprises and human resource development, to produce a business environment that is both conducive to economic development and sensitive to social and environmental requirements.
- ***Cooperation***: To promote balanced and sustainable development throughout the Union at the level of its macro-regions and to reduce “barriers effects” through cross-border cooperation and the exchange of best practices.

With Cohesion Policy it will be possible to:

- address significant needs for infrastructure investment in the Convergence regions, particularly in the new Members States, to comply with environmental legislation, whether on water, or on waste, air, and nature and species protection to support regional sustainable development ;
- ensure that attractive conditions exist for businesses and their highly-skilled staff, by promoting land-use planning which reduces urban sprawl, and by rehabilitating the physical environment, including natural and cultural assets. Investments in this area should be clearly linked to the development of innovative and job-creating businesses on the sites concerned. Funding of education and professional training on water and environment can also add to the strengths of a region;
- promote, in addition to the investment in sustainable energy and transport covered elsewhere, investment that contributes to the EU Kyoto commitments;
- undertake risk prevention measures through improved management of natural resources, more targeted research, better use of information and communication technologies (ICTs), and more innovative public management policies.

The table below lists types of activities under the WFD that could be funded via Cohesion Policy and Structural Funds. (Source: WWF EU Funding Handbook, 2005)

	Cost item	Funding Options		
		ERDF	ESF	Cohesion Fund
Framework for management and administration	Administration of River Basin Authorities (RBAs)			
	Strengthening of RBAs	X	X	
	Technical capacity-building for RBAs	X	X	
	Setting up a stakeholder network and managing the participatory processes by RBAs		X	
	Support and capacity-building of stakeholders/interested parties by RBAs	X	X	
	Communication/information material and publications for participatory processes managed by RBAs			
	Scientific studies, inventories, mapping	X	X	
	Awareness-raising campaigns		X	
Operation and monitoring	Monitoring systems and risk analyses	X		
	Pilot demonstrations			
	Flood risk management	X		
	Vegetation restoration			
	Erosion control	X		
	Water-saving solutions for agriculture			
	Water-saving solutions for industry	X		
	Water-saving solutions for end-users			
Pollution control				
Infrastructure	Adapting existing water infrastructures	X		X
	New infrastructures for the management of water resources	X		X
	Improvement of water networks	X		X
	Wetland restoration	X		
	Equipment acquisition	X		

## 4. WHAT CAN COHESION AND WATER POLICY PROJECTS DELIVER?

This section gives examples to illustrate different types of project which have real potential to help achieve Water Policy and Structural Fund objectives:

- Integrated Water Management
- Water Quality
- Water Supply Services
- Risk Management
- Wetland Restoration

Several other activities can receive Community funding, e.g. ESF funding for job creation in the field of water resources management or river conservation.



*Floodplain restoration combining flood protection and nature development - Restoring the estuaries of the Kinzig and Schutter Rivers (Photo: Regierungspräsidium Freiburg, Baden-Württemberg, Germany)*

## ***Integrated Water Management***

The aim of integrated water management is to prevent the deterioration of aquatic ecosystems, and indeed to encourage their improvement. It covers surface water, groundwater, transitional and coastal water, considering the quantitative, qualitative, ecological and economic aspects, and involving all the relevant stakeholders.

### **Economic benefits**

- If water resources are not sufficiently protected, the use potential is impaired and the cost of supply and treatment increases (e.g. increasing costs for drinking water).
- By taking action now future damage is prevented, thus protecting a region's long-term development potential.
- Financial resources are allocated cost-efficiently within the region according to the principle of disproportionate costs, since good water quality must be affordable.
- Cost sharing, cost saving and cost efficiency as a result of transnational co-operation.
- Transparency and planning security for the investors and citizens within the catchment area as regards water supply and environmental quality.
- The attractiveness and the identity of a region are preserved, and these are the basis for employment and economic growth.

### **Environmental benefits**

- The good status of the water resource is achieved and maintained.
- It takes account of all parts of the water system, protecting them by halting biodiversity loss, preventing deterioration, and improving aquatic ecosystems.
- International harmonisation at river basin level makes it possible to tackle trans-boundary quality and quantity problems.

### **Social benefits**

- Improvement and preservation of the health of citizens.
- Conservation of a well functioning water system for future generations.
- Creation of jobs as a result of sustainable activities.
- Access to high quality water at affordable prices.
- Limitation of impacts of floods and droughts.

### **Case Study: Scaldit**

Since the introduction five years ago of the European Water Framework Directive (WFD), the EU has shared responsibility for the management of international river basins. The aim of the INTERREG IIIB NWE Scaldit-project, a four year project involving six authorities from Belgium, France and the Netherlands, is to intensify and strengthen co-operation between the riparian states of the Scheldt, particularly with regard to the implementation of the WFD in the international river basin district. This co-operation lays the basis for fully transnational integrated water management, which will ultimately result in an international river basin management plan for the Scheldt, and aims at equal protection of water resources throughout the entire river basin district.

Within this context, the Scaldit partners made a transnational analysis of the characteristics of the Scheldt river basin district, according to Art. 5 of the WFD, which resulted in the publication of the Scaldit report.

Besides co-operation on the WFD, the project also comprises action on water management and spatial planning, which is a first attempt to interlink these two policy fields. All this is supported by a comprehensive communications strategy.

The Scaldit project offers some clear benefits for the States of the Scheldt river basin:

- It increases mutual understanding between water authorities through the district and thus helps develop a more harmonised view of water management.
- It allows the partners to learn from each other, by exchanging knowledge and experience, and helps to create international networks of experts.
- It lays the basis for integrated water management in the Scheldt district and will result in the elaboration of an international river basin management plan.
- The additional EDRF financial resources under the INTERREG IIIB programmes, namely the NWE programme, allow the Member States to invest more energy in transnational cooperation and make policy-makers and the political world more aware of its importance.
- The INTERREG funding also makes it possible to communicate in a more intensive way at river basin district level.

Website: [www.scaldit.org](http://www.scaldit.org)



Picture Scaldit

## ***Water Quality***

Some infrastructure investment, like that required to meet the Urban Wastewater Treatment Directive, helps to improve water quality.

The Urban Wastewater Treatment Directive requires appropriate treatment of sewage from urban areas. Specific treatment may be required to protect sensitive areas. The Directive is a major part of EU strategy to improve water and environmental quality. It has already led to considerable environmental gains in Member States.

The Cohesion Fund is a possible source of funding for these new facilities, particularly where they are linked to integrated water management plans.

### **Economic Benefits**

- Lower costs and improved competitiveness for economic operators for whom water is a primary production input.
- Development and use of environmental and waste water treatment technologies.
- Modern infrastructure leads to reduced maintenance and processing costs.
- Increased tourism revenue because of the improved environment.

### **Environmental Benefits**

- Expanding water quality projects to include the wider environment can have multiple benefits, including improvements to human health, recreation, fisheries and wildlife.
- Emissions are reduced and less contaminants leak into the river system, and this reduces impact in the event of flooding.

### **Social Benefits**

- Better human health.
- Better opportunities for decayed urban areas and better city environment.
- More jobs in technology, operation and maintenance.
- The area becomes more attractive which encourages tourism.

## **Case Study: The Shannon Estuary**

The River Shannon and its wetlands are of European significance for wildlife. The city of Limerick, Ireland, with a growing population of 100,000, lies on the Shannon Estuary and used to discharge sewage via 50 outfalls. The Urban Waste Water Directive made it necessary to provide additional treatment. The Cohesion Fund helped finance this, along with the planning and implementation of a water quality plan for the whole estuary.

The waste water plant can treat waste from 130,000 people and produces pasteurised compost from sludge. Extensive sewers were also needed to intercept flows from the old outfalls.

The plan will help improve water quality in the river and protect its rich bird, fish and invertebrate life. Detailed ecological surveys have been made in the wetlands affected by the project and restoration measures have been carried out. Some wetlands have also been extended to enhance the region's ecology. The opportunity was also taken to alter the design of a new interceptor sewer to create a navigation weir, which has made the whole of the Shannon navigable.

Website: [www.lmdpo.com](http://www.lmdpo.com)

## ***Water Supply Services***

Water resource projects in general are infrastructure programmes aimed at providing people with water of adequate quality and supply services that are economically beneficial. With the introduction of the WFD, such projects must also be beneficial for the status of water resources unless they undertake to meet some very restrictive conditions, including mitigation of the damage. Environmental Impact Assessment (EIA) procedures should allow for such assessments. In the light of the WFD, the types of projects that would be beneficial include:

- Improving the efficiency of supply and distribution networks, thus reducing the need for additional water abstraction from the natural environment in the future.
- Improving water purification plants and investing in wastewater treatment plants, thus reducing the need for investment in purification, filtration, etc.
- Making the best use of existing infrastructure as part of an asset management strategy.

### **Economic Benefits**

Water resource projects can produce economic benefits by:

- providing water for domestic and business use and increasing security of supply;
- improving the efficiency of distribution networks, thus reducing the need for future investment;
- ensuring that drinking water is of adequate quality, thus protecting public health.

### **Environmental Benefits**

In the light of the WFD, improving the efficiency of distribution networks and optimising existing water supply services, thus:

- reducing the need for additional water abstractions from the natural environment.
- minimizing outlet pollution from water treatment plants, thereby reducing pollution in water bodies, and protecting public health and biodiversity;

Water resource projects can include preventive measures, plus economic and voluntary instruments. In particular, they can include land-use planning measures which minimise pressure on the environment while ensuring adequate supplies of safe water.

### **Social Benefits**

A range of social benefits come from water resource projects:

- a secure and safe water supply, and hence protection of public health;
- they consider differences in access to basic services by specific social groups, or geographical factors that affect access to water services;
- flood protection;
- a good public participation strategy can lead to strong community involvement in the debate on water security, quantity and quality.

## Case study: AGUA

AGUA (Spanish for Water) is the acronym for the integrated investment and management water programme of the Ministry of Environment in Spain. AGUA aims to improve water supply to meet both future demand and the need to protect water ecosystems by considering the socio-economic, environmental and territorial rationality of public investment projects. State Water Companies (Sociedades Estatales de Aguas) are in charge of implementing AGUA for the period 2004–2008. The programme is actually co-financed by the EU from the ERDF and aims to include financial resources from the Cohesion Fund.

The main aims and actions of AGUA include:

- establishing a programming framework for water infrastructure projects that reflects the investment capacity of the different implementing agencies.
- improving existing water use by increasing efficiency and productivity, introducing better tools for managing water rights (e.g. by creating “water banks”), improving the control and metering of water use, enforcing water quotas, and establishing the need for participation and co-responsibility in management and enforcement processes;
- improving the availability of (good quality) water supply by adopting the new concepts introduced by the EU-regulations and reflecting those *inter alia* in investment in wastewater collection and treatment infrastructure;
- optimising the use of water infrastructure through an ambitious programme of investment that includes modernisation of water supply systems and irrigation schemes (about 230 millions of m<sup>3</sup> per year) to reduce leaks in distribution infrastructures, and reuse of wastewater (about 140 millions of m<sup>3</sup> per year).
- building new desalinisation plants (about 620 millions of m<sup>3</sup> per year) to increase water supply to the population and reducing pressures on the aquatic environment.

Website: [www.mma.es/aqua/](http://www.mma.es/aqua/)



## ***Risk Management***

A holistic catchment management strategy is the only sustainable way of reducing the risk of flooding. The aims should be - in this order - to retain, to contain, and if that fails, to deal with the flood water.

- Catchment-based measures, including future-oriented land-use changes focusing particularly on areas likely to create run-off. Measures can include afforestation or wetland restoration, wider discharge profiles for water-courses and using agriculture to reduce run-off.
- Water and flood storage or infrastructure projects to protect inhabited areas from flooding.
- Risk management strategies in cases of actual flooding, including civil protection services and generally raising the awareness of decision-makers, planners and the public to change behaviour and increase responsibility.

Funding programmes can be used to encourage flood prevention, protection and mitigation measures in all these fields, but should also discourage further construction in flood-prone areas. The most crucial challenge for the future will be to reduce the existing damage potential (industries, houses and cultural assets) in flood-prone areas as the probability and frequency of flooding will increase.

Although the benefits of these actions are obvious, they are nevertheless listed below.

### **Economic Benefits**

- Reduced damage to infrastructure, cultural assets and houses, and reduced economic losses due to flood-related production standstill.
- Reduced costs of evacuation and flood defences.
- Reduced economic exposure in the future by preventing development in floodplains.
- Planning security for economic activity and development.

### **Environmental Benefits**

Flooding is a natural phenomenon and cannot be prevented altogether. However, its effects can be reduced:

- reducing the pollution from flooded industrial sites will minimise impacts on biodiversity and sensitive areas;
- ecological flooding sites increase biodiversity, key habitats or ecosystems and augment retention capacity.

### **Social Benefits**

The social benefits of successful flood risk management include:

- reduced disruption of citizens and communities from flooding;
- reduced stress on citizens, and less impact in the form of trauma and diseases caused by polluted water;
- a comprehensive flood management information programme will improve education and raise awareness in the region;
- historical sites that may not survive flooding or repeated exposure to high levels of water would be protected.

## Case Study: ELLA (Elbe – Labe)

### Preventive flood management by trans-national spatial planning

The floods in 2002 were a dramatic demonstration that further improvements in preventive flood protection are still necessary. Accordingly 23 national and regional partners from Germany, Austria, the Czech Republic, Poland and Hungary have started to work together on:

- preparing and agreeing a joint trans-national strategy on spatial planning in the Elbe river basin, preparing further investment projects and agreeing on concrete regional measures for preventive flood protection;
- developing an upstream-downstream compensation strategy;
- establishing a stable network of spatial planning and water authorities to be used for further planning;
- providing data and information on risk potential, measures required, effects of measures, steps towards their realisation (hazard maps, retention areas, land use, etc.) including pilot projects;
- producing Hazard-Indication-Maps (Elbe-Atlas Part 1) for the Elbe in close cooperation with water authorities, the International Commission for the Protection of the Elbe (ICPE) and Povodi Labe. The mapping of further complementary actions (Elbe-Atlas Part 2) is envisaged.

Of the total project budget of €2.56 million, 54% is EU support from the European Regional Development Fund (ERDF) and 46% is national co-financing (including PHARE<sup>1</sup> funds) by the project partners. The project is part of the EU INTERREG III B CADSES programme and runs from 2003 to 2006.

Website: [www.ella-interreg.org](http://www.ella-interreg.org)



Flooded Weesenstein, Saxony, Summer 2002

<sup>1</sup> The PHARE programme is a pre-accession instrument financed by the European Union to assist the applicant countries of Central and Eastern Europe in their preparations for joining the EU. Given that most of the 10 countries previously eligible for the PHARE programme are now Member States of the EU, the programme was adapted and will be phased out. [www.europa.eu.int/comm/enlargement/pas/phare/](http://www.europa.eu.int/comm/enlargement/pas/phare/)

## ***Wetland Restoration***

Wetlands are vital for a healthy environment and their importance will increase through climate and land-use change. They help moderate the extremes of flooding and drought whilst providing economic products and attractive landscapes for people and wildlife.

### **Economic Benefits**

Wetlands play a vital role in integrated catchment management. Potential benefits include:

- removing pollutants and improving basic water quality, which reduces water treatment costs;
- storing surface water, which can reduce flood protection costs downstream;
- providing groundwater recharge/discharge, thus reducing demand at key times;
- providing summer grazing for livestock.

### **Environmental Benefits**

Restoring wetlands has environmental benefits, including:

- enhancing wildlife habitats important for biodiversity, fisheries and recreation;
- maintaining species dependent on these unique environments;
- removing contaminants and protecting key species.

### **Social Benefits**

- providing outdoor recreation opportunities;
- reducing flood peaks, thus reducing impacts on homes and businesses downstream during prolonged rainfall;
- retaining water and releasing it during warm summer periods, thus helping to maintain flows, which in turn helps angling, water sports and enjoyment of the river and water-based environment.

### **Case Study: Morava Flood Plains, Slovakia**

The Morava river floodplain between Slovakia and Austria is a unique cross-border wetland of high biological value. Exceptionally heavy rainfall in July 1997 caused the worst recorded flooding in the Czech region of Moravia. The floods damaged buildings, roads, bridges, railway lines, and water and sewerage networks.

A project was set up with EU funding by PHARE to restore and maintain floodplain meadows along the Morava through co-operation with local communities and support for traditional land use.

The capacity of the floodplains to retain water was increased, to more than 100 million m<sup>3</sup> on the Slovak side alone. As a result, the lower 30 km of the Morava became a 5,000 ha lake during the regionally catastrophic flooding of summer 2002.

The floodplain and its wetlands were able to absorb surges of Danube floodwater, thus slowing down the flood peak. The consequences of the Danube flood were therefore minimised, compared to flooding in Germany and Austria.

Website: [www.daphne.sk](http://www.daphne.sk)

## Contacts and further information

Proposals for the new regulations for 2007–2013:

[http://www.europa.eu.int/comm/regional\\_policy/sources/docoffic/official/regulation/newregl0713\\_en.htm](http://www.europa.eu.int/comm/regional_policy/sources/docoffic/official/regulation/newregl0713_en.htm)

General Regulation: The new regulation defines common principles, rules and standards for the implementation of the ERDF, the ESF and the Cohesion Fund. Based on the principle of shared management between Commission, Member States and regions, this regulation describes programming requirements, as well as common standards for financial management, control and evaluation. The reformed delivery system will provide for a simpler, proportional and more decentralised management of Structural Funds and instruments.

European Regional Development Fund (ERDF): The role of the ERDF is to promote investment and to help reduce regional imbalances across the Union. Funding priorities would include research, innovation, environmental issues and risk prevention, while infrastructure retains an important role, especially in the least developed regions.

European Social Fund: The ESF supports policies and priorities aimed to achieve progress towards full employment, to improve quality and productivity at work, and to promote social inclusion and cohesion. The Fund's actions are in line with the guidelines and recommendations of the European Employment Strategy (EES).

Cohesion Fund: The Cohesion Fund contributes to interventions in the field of the environment and trans-European networks. It applies to Member States with a Gross National Income (GNI) of less than 90% of the Community average. The 10 new Member States as well as Greece and Portugal will benefit from this Fund. In the future, the Cohesion Fund will no longer be based on a project approach, but instead form part of multi-annual programmes in the field of transport and environment.

European grouping of cross-border co-operation (EGCC): Based on Article 159 of the Treaty and with the aim of overcoming existing obstacles hindering cross-border co-operation, a new legal instrument will be introduced to create European co-operative groupings. These will be invested with legal personality for the implementation of co-operation programmes and based on an optional convention of participating regional, local and other public authorities.

Water Framework Directive:

[www.europa.eu.int/comm/environment/water/index.htm](http://www.europa.eu.int/comm/environment/water/index.htm)

Proposal for Directive on Flood Risk Management, COM(2006)15final

[http://europa.eu.int/comm/environment/water/flood\\_risk/index.htm](http://europa.eu.int/comm/environment/water/flood_risk/index.htm)

Community Initiative INTERREG

[www.europa.eu.int/comm/regional\\_policy/interreg3/abc/abc\\_de.htm](http://www.europa.eu.int/comm/regional_policy/interreg3/abc/abc_de.htm)

Guidance documents from the EU Water Framework Directive

Common Implementation Strategy

[forum.europa.eu.int/Public/irc/env/wfd/library?!=/framework\\_directive/guidance\\_documents](http://forum.europa.eu.int/Public/irc/env/wfd/library?!=/framework_directive/guidance_documents)

WWF European Policy Office:

[www.panda.org/epo/index.cfm](http://www.panda.org/epo/index.cfm)

Best Practice Document on Flood Prevention, Protection and Mitigation

[www.floods.org/PDF/Intl\\_BestPractices\\_EU\\_2004.pdf](http://www.floods.org/PDF/Intl_BestPractices_EU_2004.pdf)

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### Pictures:

- front page: Rhine near Schaffhausen, Switzerland, photo: Almut Nagel
- page 8: River Catchments of Europe, Joint Research Center, ISPRA
- page 18: Restoring the estuaries of Kinzig/Schutter rivers, photo: Regierungspräsidium Freiburg, Baden-Württemberg, Germany)
- page 20: Picture taken from homepage [www.scaldit.org](http://www.scaldit.org)
- page 23: Picture taken from homepage of AGUA [www.mme.es/agua](http://www.mme.es/agua)
- page 25: Flooding in Weesenstein, Saxony, Germany, Summer 2002, Photo: ELLA-project.

## Annex

# The Mainz Declaration

### Explanatory note

From 17-19 October the International Conference on Flood Risk Management and Multifunctional Land Use in River Catchments was held in Mainz, Germany.

The Conference was jointly organized by the SDF-project and the INTERREG IIIB North West Europe Joint Technical Secretariat. Some 20 INTERREG IIIB projects dealing with water and flood risks in North-West Europe, the North Sea Area, CADSES and Alpine Space presented their projects results so far. The conference covered three major themes: flood damage prevention, multifunctional land use, communication and community involvement. Some 170 participants from 10 European countries actively participated in the presentations and discussions.

The conference results were presented in the **Mainz Declaration** to a Panel of high level national and regional politicians and policy makers mainly from:

- The Netherlands (Director Water and Navigation Rijkswaterstaat Oost Nederland,)
- Germany (Minister of Environment and Forestry of Rhineland Palatinate, Minister of Environment, Nature, Agriculture and Food Protection of North Rhine Westfalia, Minister of Environment of Hessen, Regierungspraesidium Karlsruhe of Baden Württemberg)
- United Kingdom (Department of Environment, Food, Rural affairs, UK)

The added value of trans-national cooperation and EU funding support to flood damage prevention measures were important subjects of the discussion.

The Panel members and the conference participants fully endorsed the Mainz Declaration.

The "Mainz Declaration" calls on those, who lead our countries (politicians, policy makers and administrators) to take a long term view and set the topics of quantitative and qualitative aspects of water management at the top of their agenda.

This includes:

- the appropriate provision of European funding for trans-national cooperation, including funding of investments and corresponding national co-financing;
- working to ensure that the results of different directives are compatible with good water management policies;
- a high priority for water management issues in the ERDF and related programmes such as Rural Development;
- supporting these initiatives with the necessary staffing and resources within the member states, river commissions and in the EU;
- promoting continuity in the existing fruitful trans-national cooperative partnerships and networks.

The outcome of the conference of Mainz, held in an international setting, has started to show that valuable results can be achieved with trans-national water projects funded by the EU. Recognising that changes in management practice and public perception are long-term issues we need continuity of support beyond 2006 in order to consolidate these achievements and secure long-term benefits.

International Conference on Flood Risk Management and  
Multi-functional Land Use in River Catchments,  
17-19 October, Mainz/Germany

## **Mainz Declaration**

Water is known as source of life or 'sine qua non'. Water is the vital prerequisite of our whole natural environment and for all our socio-economic developments. Floods and droughts emphasise the strong political dimension of water management issues.

The disastrous flood events in Europe of the last years have anew shown the relevance of early warning systems and stressed again the relevance of holistic and basin wide strategies for flood alleviation and protection. Political action in the field of flood management must be combined with serious efforts in climate protection on all levels as flood risks, probabilities and extreme events will increase in frequency and magnitude. Political action must be accompanied by public participation and the acceptance of flood alleviation measures, not only focussed on technical measures but following the motto 'Space for the River'.

As water does not respect national boundaries it is essential to consider the entire catchment through effective cross-border cooperation. Similarly the wide range of impacts requires a cross-sectoral approach to achieve maximum security for those who are exposed to the dangers of flood events. This takes into account honesty and transparency towards our citizens, farmers, the industrial companies, authorities communities and other actors who need planning security.

Why do we need trans-national cooperation?

- ***INTERREG projects act as important catalysts for tackling flood issues and strengthening innovative, integrated strategies.***
- ***European Funds can thus be seen as 'seed money' to promote innovative steps and speed up the process of implementation.***
- ***To involve more partners from different regions adds extra value to output of the projects.***
- ***It leads to cost efficiency within the projects and results may be transferred to other countries/river catchments.***
- ***Integration of the new member states of the EU will be facilitated.***
- ***Creating solidarity along the river and recognising the over all responsibility as every action is part of the whole.***

The catchment-based approach for an integrated water management – implemented in the INTERREG programmes since 1997 – has already been proved successful in it's

application in the work of the international river commissions and the predetermined cooperation at catchment level in the implementation of the Water Framework Directive. Efforts on management of flood risks will be further supported by the ongoing EU Flood Action Programme for which an appropriate legal tool will be proposed soon by the EC.

The relevance of the political aims of the European Union, which hold protection against natural hazards as one of the key priorities of the Gothenburg strategy, also need to be reflected in an appropriately funded and conceived programme based on specific key priorities of the European funding policy: the overall cohesion policy with a focus on trans-national cooperation, the programmes on rural development, agriculture, biodiversity conservation and research policy.

Therefore the “Mainz Declaration” calls on those, who lead our countries (politicians, policy makers and administrators) to take a long term view and set the topics of quantitative and qualitative aspects of water management at the top of their agenda. This includes:

- the appropriate provision of European funding for trans-national cooperation, including funding of investments and corresponding national co-financing;
- working to ensure that the results of different directives are compatible with good water management policies;
- a high priority for water management issues in the ERDF and related programmes such as Rural Development;
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The outcome of the conference of Mainz, held in an international setting, has started to show that valuable results can be achieved with trans-national water projects funded by the EU. Recognising that changes in management practice and public perception are long-term issues we need continuity of support beyond 2006 in order to consolidate these achievements and secure long-term benefits.

Mainz, October 2005