

# 2ND RIVER BASIN MANAGEMENT PLANS

HEALTHIER RIVERS  
LESS DAMS, DYKES  
AND NITROGEN

A CAMPAIGNING PAPER



EUROPEAN  
ENVIRONMENTAL  
BUREAU

The **European Environment Bureau (EEB)** is a federation of over 140 environmental citizens' organisations based in most EU Member States, most candidate and potential candidate countries as well as in a few neighbouring countries. These organisations range from local and national, to European and international. EEB's aim is to protect and improve the environment by influencing EU policy, promoting sustainable development objectives and ensuring that Europe's citizens can play a part in achieving these goals.

EEB stands for environmental justice and participatory democracy. Our office in Brussels was established in 1974 to provide a focal point for our members to monitor and respond to the EU's emerging environmental policy.

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# PURSUING THE PROMISE OF CLEANER WATERS IN EUROPE

**T**he Water Framework Directive (WFD) that the European Union adopted in 2000 is a formidable instrument to effectively address the pressures on European freshwaters in a holistic and integrated way. The 2012 ‘fitness check’ of EU freshwater policy confirmed that the current water policy framework is adequate to address the challenges faced by European freshwaters.

Thanks to this common European framework and the adoption of the first generation of River Basin Management Plans (RBMPs), some progress has been achieved. The improvements have however been relatively modest and significantly below original expectations. The target of getting all European waters in good condition by 2015 will indeed be missed by far – about half of European surface waters are in fact unlikely to reach good ecological status in 2015. We can do much better than that.

The second RBMPs, which are currently under development in the Member States and will cover the 2016-2021 period, need to build on the lessons drawn from the first generation of Plans and include the measures required to speed up progress towards achieving the Directive’s objective.

In order to support citizens and citizens’ groups involved in the ongoing public consultation on the draft plans, the EEB has put together this publication building on the experience of its members with WFD implementation.

We hope that it will help environmental NGOs as well as other interested members of the public in critically scrutinizing the draft plans and making constructive proposals. This will help to ensure that we have second RBMPs that truly deliver the measures needed to achieve good status in all bodies of surface water and groundwater by the end of 2021.

**Jeremy Wates**  
**Secretary General**  
**European Environmental Bureau**

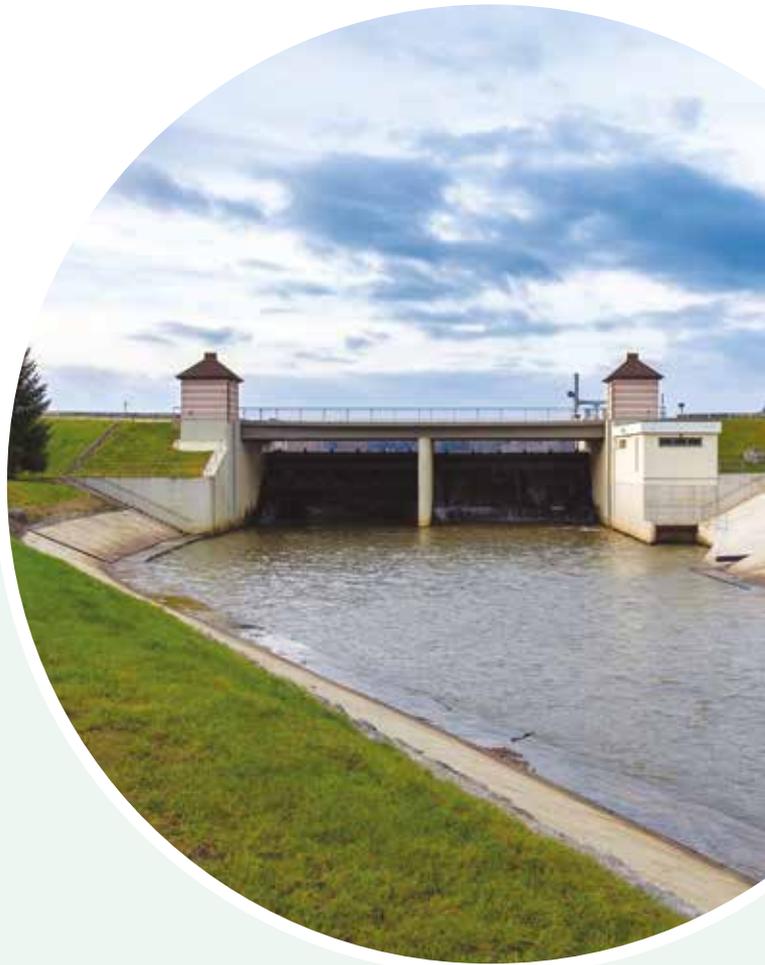


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# ABOUT THIS PAPER

**T**his publication addresses environmental campaigners, experts and civil society organisations in Europe to help them to influence and improve the second round of River Basin Management Planning in Europe.



**//** River basin management is clearly the appropriate instrument to bring about the environmental, social and economic changes needed to reduce pressures on European freshwaters. Allowing for public participation fosters societal/ community support and improves the effectiveness of water protection and restoration measures through better policy integration. **//**



# FROM RECOGNITION TO RECOVERY

**T**he European Union's Water Framework Directive (WFD) has changed our view on water protection fundamentally. It made us recognise that our waters are not that well protected after all and far from being managed sustainably. Better than ever before, we understand that rivers need to be less constrained by dams and dykes and less polluted by nitrogen and chemicals, if they are to support a healthy and stable ecosystem and future generations are to be provided with a fair opportunity for socio-economic development.

River basin management is clearly the appropriate instrument to bring about the environmental, social and economic changes needed to reduce those pressures. Allowing for public participation fosters societal/community support and improves the effectiveness of water protection and restoration measures through better policy integration.

However the first round of River Basin Management Plans (RBMP) in 2009 did not achieve this. While river basin authorities made progress in developing the new water status

classification and in stepping up water body specific restoration measures, they often fell short in addressing different sectoral policies, which affect waters, and in developing river basin level strategies. Relevant justification for the massive use of exemptions, postponing and lowering of objectives, has rarely been provided. Only 10% progress is expected to result from the first round of RBMPs<sup>1</sup>: the percentage of water bodies in need of restoration to achieve good status has gone from 57% in 2009 to 47% in 2015. That is a painfully slow start by any measure. If progress is not improved it would take another 30 years to reach the WFD objective. It is time to do more, faster and better! For the second round of the RBMPs, which are due by the end of 2015, we want a broader and more transparent approach in the selection of cost-effective water protection measures and in setting environmental objectives at river basin level. Reducing pressure on the water resources at that scale, requires reducing waste of the basin's finite resources, including water, land and energy. In today's resource-constrained world this is an environmental, social and economic imperative.



# RIVER BASINS, MORE THAN THE SUM OF WATER BODIES

**R**iver Basin Management Plans (RBMPs) must be more than the sum of restoration and protection measures for a river basin's water bodies. Water bodies are all interconnected. Their status depends on multiple factors, in particular the pressures from the energy, agriculture, transport and housing sectors in the river basin. These pressures should be addressed in the RBMPs, which are the place to deliver integrated river basin wide planning to identify the strategic and cross-cutting problems and solutions. Only those can step up restoration and deliver large scale water status improvements while supporting the transition to sustainable economic development.

The 1st round of RBMPs did not achieve this yet. Unsustainable and unrealistic economic projections, assuming ever growing energy and mobility demands and low growth for environmental friendly farming, have often been taken for granted and were used to justify the postponement of river restoration. Nearly half of all water bodies in the EU are expected to fail the good ecological status objectives. Exemptions from reaching good status in 2015 have been used extensively and often arbitrarily<sup>2</sup>. Crosscutting problems, such as the interruption of continuity and connectivity of rivers due to dams and dykes, or wide-spread nitrogen pollution, are too often looked at from a single water body perspective, where the solutions are not available or are too expensive.

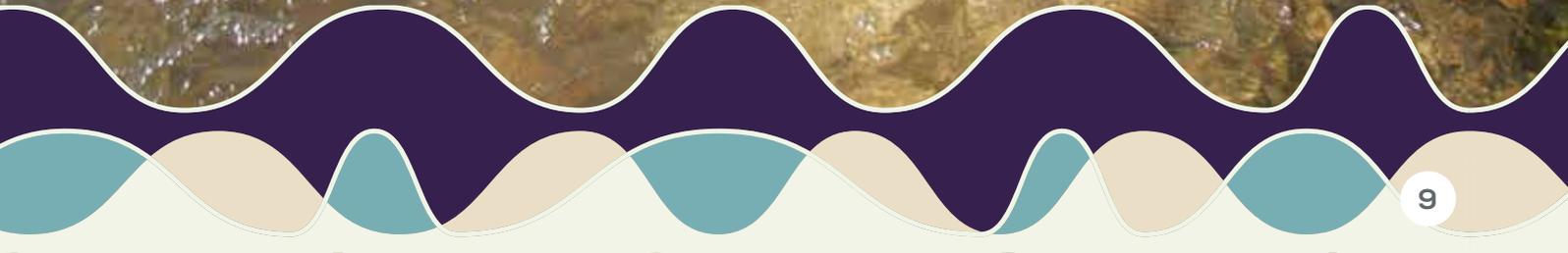
The 2nd round of RBMPs will have to move away from such a harmful approach and should

consider different development scenarios impacting water management/use. In particular, resource efficiency scenarios can provide substantial economic, social and security benefits.

The demand for energy from water is already stagnating or decreasing in Europe and passenger transport is decoupling from economic growth<sup>3</sup>. Measures to increase energy and water efficiency will further reduce energy demand and also reduce the need for energy crops or new hydro dams while creating and maintaining local jobs, stimulating the economy and increasing public revenues through adequate pricing.

Building on efficiency scenarios will enable new and strategic planning of river basin wide measures to improve water status, reduce the use of exemptions and increase the number of water bodies reaching good status and deliver healthy aquatic ecosystems.

**Measures to increase energy and water efficiency will further reduce energy demand and also reduce the need for energy crops or new hydro dams**



# MANAGEMENT PRIORITIES: DAMS, DYKES AND NITROGEN

**T**he first round of River Basin Management Plans revealed that across Europe, human alterations of the water flow and structure and diffuse pollution are causing the majority of failures in reaching a good ecological status.

Dams and dykes, which are dominant water management elements, substantially change the water flow (hydrology, the volume and distribution of water) and structure (morphology, including the sediment, river bed and connection

of a river with floodplains). As a consequence aquatic fauna and flora suffers, fish population declines, coastal erosion increases and groundwater levels fall. The resilience of the river basin to climate change and weather extremes is reduced.

Agricultural emissions of nitrogen fundamentally change the global nitrogen cycle, causing death zones in aquatic ecosystems, contaminating drinking water resources, and causing the ubiquitous eutrophication of rivers, lakes and marine waters and biodiversity loss.



// Dams and dykes, which are dominant water management elements, substantially change the water flow and structure //

// Agricultural emissions of nitrogen fundamentally change the global nitrogen cycle, causing death zones in aquatic ecosystems //

# Dams – AN EXPENSIVE LEGACY

**D**ams can provide important services such as energy production and storage and supplying water to households, farmers and industries. But they are fundamentally changing the hydrological cycle, interrupting continuity for migratory species and sediments and deteriorating the quality of aquatic habitats of the whole river downstream deep into coastal waters. In most EU countries, the hydropower plants which offer the highest energy return on investment have already been built – for new dams returns would be much lower. While there is clearly a case for increasing the efficiency of existing dams rather than building new ones (e.g. through better-designed turbines and higher efficiency in the electrical equipment), the first priority for investment should nevertheless be the substantial reduction of energy and water wastage.

In the first RBMPs the priority was to mitigate the impact of dams by retrofitting them with fish by-passes and improving minimum flows. Those measures are costly and will not restore the natural river ecosystem. Such a priority ignores that:

## Ending the wastage of water and energy will make many dams in Europe redundant.

More than 25% of water used in agriculture, households and industry can be saved by increasing technical efficiency in a cost-effective way in the EU<sup>4</sup>. This means some 68bn m<sup>3</sup> per year can be saved or

- 15 times the volume which could be stored by dams in Germany; and
- 1.25 times the volume which could be stored by dams in Spain.

In addition, the EU has a high and yet untapped cost-effective energy savings potential of 40% by 2030<sup>5</sup>. Realising that would not only reduce water consumption for cooling purposes in thermal power plants, but would also significantly reduce the need for dams and reservoirs for hydropower.

The savings for consumers due to lower energy and water bills would be enormous. For example, replacing old shower heads and water taps by more efficient ones can already reduce household bills in the EU by a total of €33.2 billion per year in 2030<sup>6</sup>.

## Many dams and weirs are a legacy and are already economically obsolete.

They outlived their original service function of powering mills and hydro turbines, for regulating water levels for navigation or stabilising river channels. Others require costly safety repairs, which outweigh their financial benefits, or their capacity has been significantly reduced due to ongoing sedimentation.

Therefore we need to change the priorities of the 2nd RBMPs and ensure they foresee:

1. A reduction in the overall need for dams, by stopping the wastage of water and energy as the better environmental and economic alternative.

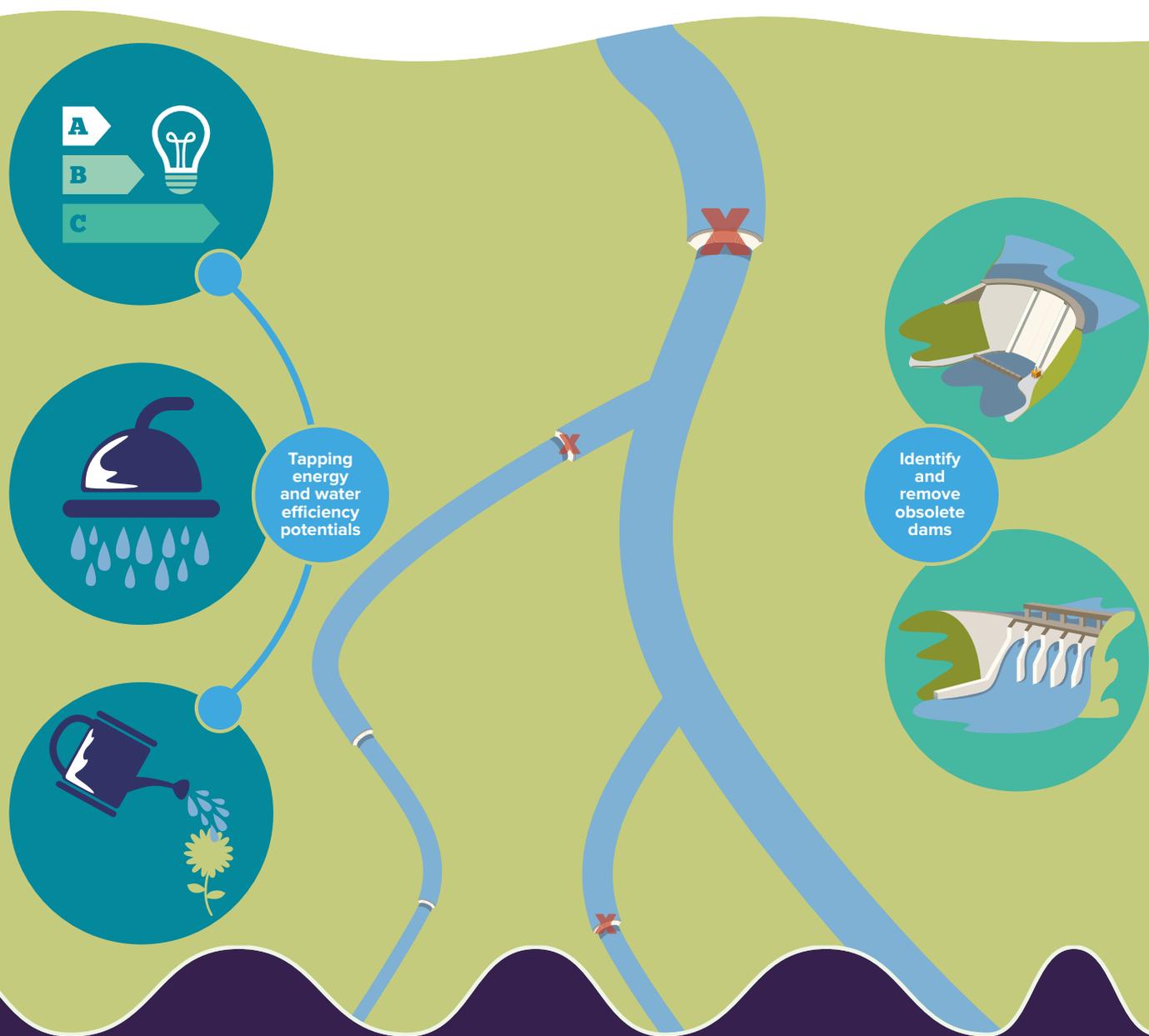
As a start the 2nd RBMP must include water and energy saving scenarios. The latter can be linked to, and derive its information from, the National Energy Efficiency Action Plans from April 2014. These have to include overall national energy savings targets for 2020 according to the Energy Efficiency Directive. Water saving scenarios should be developed considering the different potentials in the main water users groups, households, agriculture, industry and energy.

The impact in terms of reduced dam and water storage volumes of those saving scenarios should be assessed and presented.

2. The identification of obsolete dams and a removal plan

The RBMPs should include:

- a. inventories of existing dams including original and today's main purpose and key dates of user licenses;
- b. cost-benefit screening for all dams;
- c. prioritisation for removal;
- d. local involvement strategies; and
- e. financing programmes.



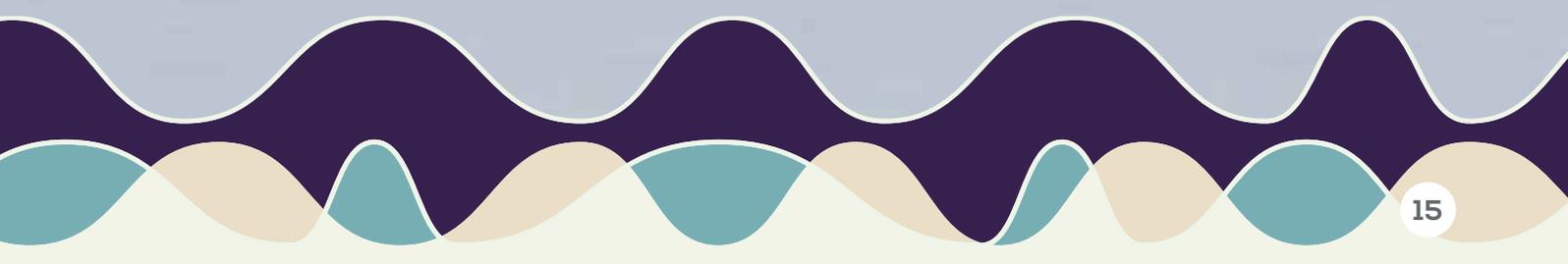
**It is estimated that more than 10,000 dams in western and northern Europe will require a renewal of their concession over the coming decades. This will be the moment to assess whether decommissioning is the most economically and environmentally effective option.**



## Dam decommissioning gaining pace

The US is leading the decommissioning of dams. Overall more than 1,000 dams have been removed US wide, nearly 600 in the period 1999-2012 and 63 alone in the year 2012. For the EU statistics are missing, but there is evidence that the decommissioning of dams in France and Spain is gaining pace. It is estimated that more than 10,000 dams in western and northern Europe will require a renewal of their concession over the coming decades. This will be the moment to assess whether decommissioning is the most economically and environmentally effective option.

Source: American Rivers 2012  
[www.rivernet.org/general/dams/decommissioning/decom3\\_e.htm](http://www.rivernet.org/general/dams/decommissioning/decom3_e.htm)



# Dykes – MAKING SPACE FOR GREEN INFRASTRUCTURE BENEFITS

**D**ykes are important flood protection infrastructures which increase the financial value of land and boost the appropriation by farmers, industry and building owners. A century ago they also regulated the water levels for a booming inland navigation. But the public cost of dykes is high: as rivers are constricted to narrow channels, flooding risks downstream increase as the natural water retention capacity of ecosystems is lost, fish populations decline as their habitats and fish nurseries are lost, the natural treatment of polluted water is undermined and ground water levels fall.

In many parts of Europe inland navigation has seriously declined, undermining the rationale for maintaining the costly infrastructure on which it depends. But private land owners are likely to be concerned about the value of their land if one would return to free flowing rivers or set back dykes to increase the space for rivers and re-activate floodplains.

The 2nd RBMPs offers the opportunity to take a fresh look at the costs and benefits. Despite the increasing number and height of dykes, flood risks in Europe are increasing and economic damage caused by floods have reached over €6 billion per year. These costs are set to rise with climate change to €8-15 billion a year<sup>7</sup>. Not only will it be difficult to win this race by building ever more and higher dykes but the costs from the loss of ecosystem services provided by green infrastructures, like wetlands and floodplains, would also grow exponentially. Whether or not it makes economic sense to

restore floodplains all depends on the type of land use concerned. Agricultural production in former floodplains, especially where land has only been converted to agricultural production rather recently, frequently has a rather low output per hectare. Intensive farming in former floodplains and drained wetlands may not be justified on economic grounds and is often a legacy of the past.

On the other hand the financial value of land for housing and industrial activities can be high in or near European metropolitan areas.

## The economic benefits of floodplain restoration

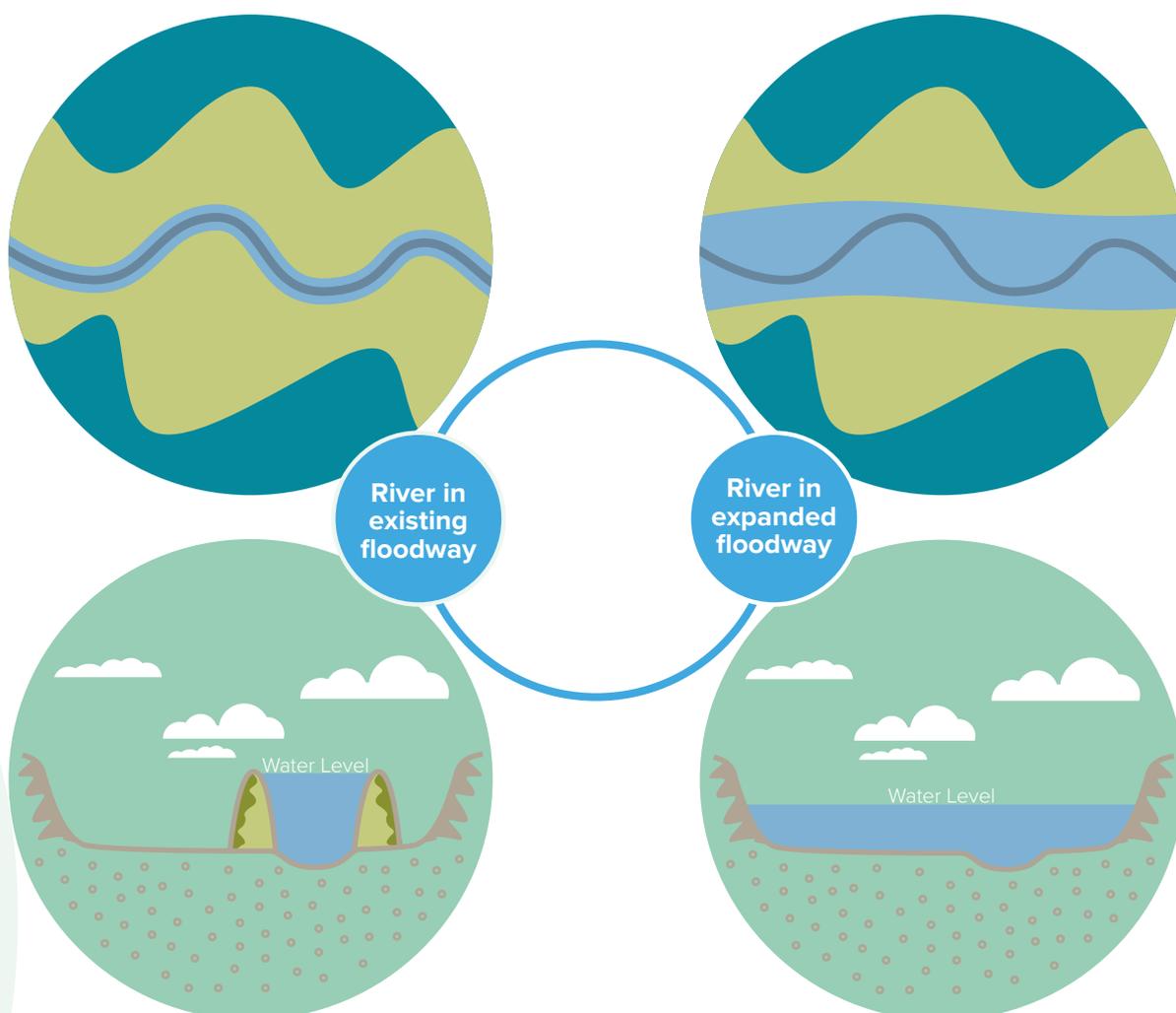
The multiple benefits of restored floodplains vary depending on their location but have been estimated at €500 per hectare a year in the lower Danube, €2,500 per hectare and year in France and up to €112,000 per hectare and year in a specific case in Belgium<sup>8</sup>. The benefits are dominated by flood protection and drinking water provision. Other benefits, including food and biomass production and recreational activities, are more difficult to quantify. On the cost side of floodplain restoration dominates the land purchase costs and engineering works, like dyke setbacks, ranging from €5,000 to 100,000 per hectare for the cases mentioned. At the same time dyke setbacks offer particular potential for synergies between nature conservation, recreation and improved water management.

In those cases it will be important to tackle new development under a full cost-recovery perspective. Only if the flood protection costs are fully internalised by the private beneficiaries of the land development, should such projects go ahead. In addition, the costs and benefits associated with the maintenance and strengthening of flood protection should be readily available to all stakeholders with a view of improving the cost-effectiveness of measures and ensuring a fair distribution of costs and benefits.

Therefore we want that 2nd RBMPs:

1. Recover the costs of existing, new and additional flood protection services from land owners and developers. This involves
  - a. Assessment of cost-recovery for flood protection services;

- b. Improved transparency and update the economic characterisation including flood protection services using the floods risk maps and plans as required by the EU Floods Directive; and
  - c. Introduction of binding requirements for land use planning to assess the costs of flood protection service for new developments and how far they will be recovered from the beneficiaries of the new developments.
2. Include a natural water retention plan including dyke removal and set-back. This requires
  - a. Inventory of agricultural activities in flood plains;
  - b. Establishment of cost-benefit assessment methods for dyke removal and setback;
  - c. Local involvement strategies; and
  - d. Financing programmes to ensure transition.



# STOPPING NITROGEN MISMANAGEMENT

**N**itrogen pollution from agricultural activities is one of the largest global environmental problems. It leads to the acidification and suffocation of aquatic ecosystems, until only few species can survive, and represents a massive waste of economic resources.

The global production of agriculture nitrogen fertilisers would need to be reduced by 50% to respect the global carrying capacity according to a recent study<sup>9</sup>.

Despite the problem being recognised and understood several decades ago already, nitrogen pollution from agriculture remains at high levels in the EU and causes the ubiquitous exceeding of standards which must be met to achieve good water status. Legislation to reduce nitrates from agricultural activities is often poorly implemented by Member States and farmers' compliance conditions for receiving EU farming subsidies has not been effective – in particular due to low level of inspections<sup>10</sup>.

Reducing loss of nitrogen at farm level is several times cheaper than removing it from drinking water sources. Many drinking water providers are already cutting deals with farmers to reduce their activities in order to avoid upgrades for drinking water plants and to keep costs lower for households.

But does this make economic sense? More than 1/3 of the EU budget, around 40 billion Euro a year, are paid out to farmers either as direct payments or through market interventions.

By encouraging an increase in agricultural production instead of quality, the system often causes resource mismanagement and ignores the role of agriculture in providing wider public goods and services. It would clearly make economic sense to redirect more of this money to environmental measures which help reduce nitrogen pollution. Some of these measures can also significantly improve the ecological status of rivers. The creation of buffer strips along water courses, for example, could reduce the clogging of river beds from fine sediments which get into water courses because of soil erosion and destroy the habitats of endangered mussels, fish and macroinvertebrates and undermine the filtering function of river beds.

## Quotas and buffer zones combine to halve nitrogen losses in Denmark

With a combination of decreasing nitrogen quotas, taxation and specific use requirements, nitrogen losses in Denmark were reduced over the last ten years by about 50%. Quotas are established for each farmer based on individually calculated optimum fertilisation plans, based on soil and farming information. The farmer has to provide this information when applying for direct payments from the EU Common Agricultural Policy. The rules are enforced in several steps, including that only farmers with a fertilisation plan can purchase fertilisers and that authorities use plausibility and spot checks

How can RBMPs change this picture? By starting with transparency and investigating links between subsidies and nitrogen.

This means that the 2nd round of RBMPs has to:

1. **Better use existing public money, by**
  - mapping the different types of farmers' payments within the river basin. These might include income support, market intervention and agri-environmental schemes;
  - assessing recovery of the costs of nutrient removal from public water services; and
  - introducing the polluter pays principle, starting with systematic mentioning on the domestic water bill of the costs for nutrients removal and who pays for it.

2. **Develop financing plans which tap into the EU financing available for green infrastructure projects, in particular for increasing buffer zones which should be closely linked to floodplain restoration.**

to identify and to fine offenders. The quota system is complemented by a tax on fertilisers for small farmers. An 2008 evaluation found that progress was insufficient and the quotas were further reduced by 15% and specific measures, including a ban on nitrogen use in a 10m buffer zone adjacent to water bodies, were introduced<sup>11</sup>.

Source: Vandmiljø og natur 2013, URL: <http://dce2.au.dk/pub/SR126.pdf>

**Despite the problem being recognised and understood several decades ago already, nitrogen pollution from agriculture remains at high levels in the EU and causes the ubiquitous exceeding of standards which must be met to achieve good water status.**

# FINANCING RIVER RESTORATION

## – AN ATTRACTIVE INVESTMENT CASE BENEFITTING BOTH PEOPLE AND NATURE

**R**estoring the water status in river basins will require significant levels of funding at a time when public funding is scarce and private investment is very low and prone to seek quick returns on investment. While public authorities and the EU's political leadership are busy looking for projects that can attract private financing to create jobs and strengthen the economy, they still too often disregard the opportunities created by green infrastructure and river restoration projects. Those projects are usually seen as costs only. There is a need to change this mindset, especially since such investments have shown to be cost-effective and deliver public benefits, including strengthening local economic activities and creating jobs while reducing vulnerability to weather extremes and pollution. Many grey infrastructure projects, like new dams and dykes, have the opposite effect and require capital intensive management in the long-run.

But what is the investment case for river restoration at river basin level? Good water status delivers multiple economic benefits, which result from the reduced costs for treating water, providing clean water and food, and managing floods and droughts, as well as from recreation and tourism. At river basin level the benefits of multiple river restorations can add up to a significant positive impact on the creation of local and stable jobs and economic development. This is also increasingly recognised at EU level, where Cohesion Policy has been used to fund the restoration of wetlands and floodplains. There is mounting evidence that investments of the European Regional Development Fund and Cohesion Fund in nature and green infrastructure can actually contribute to several policy objectives



### **Social benefits from investments into restoration: getting people back into working life**

In the Weser catchment area several local authorities along the rivers Werre and Else decided to combine water restoration measures with job opportunities. A common and integrated programme was established and run in cooperation with further relevant bodies (e.g. employment administration). As a result more than 100 long-term unemployed people were (temporarily) employed and – simultaneously – gained a qualification. Furthermore, at least one fifth of the employees got a long term job following their work on this project.

Source: [weser-werre-else.de](http://weser-werre-else.de)

and deliver multiple benefits, in particular socio-economic development<sup>12, 13</sup>.

The economic importance of the status of water in river basins can be illustrated in different ways, as shown by the following examples:

- Recreation businesses in the USA, which depend on the Colorado River, make their case for protecting and restoring the river flows, demonstrating that if the Colorado River were a company it would rank as 19th largest employer in the USA.
- Essential ecosystem services, like waste and nutrient recycling and provision of clean water attributed to rivers, lochs and estuaries of the Scottish River Basin District are estimated to be worth more than 3% of total economic output, more than double the agriculture output.
- Clean bathing waters are the bottom line of 10-20% of the economy of the Artois-Picardie River Basin in the north of France. 'Opal Coast' tourism creates € 1 billion turnover per year, 40 percent of the river basin. It is estimated that 30 to 50 percent of visitors would cancel their trips if water quality were not good.

How to attract adequate financing from different sources and ensure it is well managed to serve the public interest? In the coming decades Europe's water infrastructure will undergo major renovation and re-designing to repair an ageing system and adapt it to a changing climate. This will require significant investments and increasing the funds available. The choice we have is to either invest resources in to a resilient water infrastructure which restores ecosystem functions and reduces operational costs, or do more of the same, focussing on new dams and dykes to fill gaps in an increasingly risky and fragile water management system. Tapping into these sources of funding will require that projects be proposed that deliver on the objectives of flood protection or climate adaptation while at the same time positively contributing to the restoration of freshwater ecosystems. In order to create a favourable framework for such projects the RBMPs need to link to other existing landscape scale strategic plans and projects and ensure that water specific objectives are not pursued in isolation from other potentially relevant policy initiatives in the river basin.

In order to get it right, common barriers to financing river restoration have to be removed:

- Public authorities often treat restoration projects as additional costs of water management in river basins rather than a long term investments in essential public infrastructure, which delivers both immediate and long-term benefits and reduces future costs and risks. It is essential that a longer planning horizon be adopted and wider public benefits fully considered.
- Numerous perverse subsidies for land and water intensive practices, such as intensive agriculture, inland navigation and urban sprawl, distort the picture. Reform and removal of some of these subsidies could result in a double dividend, both reducing environmental harm and freeing up funds for more productive investments.
- The ones who bear the costs of river restoration, such as the river basin authorities, who pay for the works, and the land owners, who may lose user rights and income, are often not the ones who benefit the most from the restoration, like tourism sector, environmental service providers (waste and water) and downstream water users. A transparent identification of winners and losers of a new approach with an equitable distribution of the costs and possibility for compensation of the losers can help facilitate reform.

**This means that the 2nd round of RBMPs has to:**

- **Ensure that river restoration will become an investment priority for renovating and adapting Europe's ageing water infrastructure to climate change and increased flood and drought risks.**
- **Help removing barriers to financing river restoration, including incorrect accounting and perceptions, perverse subsidies and split incentives.**
- **Map available public funding streams, including water, energy and land use bills and EU agricultural and cohesion funds against restoration requirements and provide a financing plan.**

# FROM EXEMPTIONS TO DELIVERY – 9 RECOMMENDATIONS

## Sharing decisions, dealing with dams, dykes and nitrogen

Public authorities in charge of relevant activities in river basins have to share decision-making much more than in the past. This means that public participation must be seen as an opportunity to confront alternative visions of the river basin's future rather than a technical exercise about individual bodies of water.

- **The second round of RBMPs has to increase sharing of decisions between public authorities and citizens.**

The negative impact of dams is well recognised but remedies are far from being cost-effective. It is time to set new priorities by:

- **Reducing the overall need for dams, by stopping the wastage of water and energy as a better environmental and economic alternative; and**
- **Identifying obsolete dams and establishing removal plans.**

Dykes have received less attention, but given the increasing problems with floods and nitrogen pollution, this is no longer tenable. The RBMPs are a great opportunity to better integrate flood management, water protection and land use planning using the robust economic rationale for cost-recovery. Therefore the 2nd RBMPs have to:

- **Recover costs of flood protection services from land owners and developers; and**
- **Set out natural water retention plan including removal and set-back of dykes.**

Nitrogen pollution from agricultural activities is one of Europe's largest environmental problems and a huge waste of money. It is high time to:

- **Use existing public money better, in particular by showing where public money is spent, how much it costs to remove nutrients and who pays for the damage; and**
- **Develop financing plans in particular for increasing buffer zones along water streams and bodies which should be closely linked to floodplain restoration.**

## Making it happen: creating efficiency scenarios and finding the finance

The basin characterisation has to build on an open economic assessment, applying a broad approach to cost-recovery and high efficiency water, energy and land use projections.

The changes in our energy systems, urban development, transport and agriculture, and the changes in water management have to reinforce each other in order to improve the cost-effectiveness of protecting and restoring a good water status. This will help to move away from arbitrary use of water pricing instruments and of exemptions from reaching the WFD objectives, which has characterised the 1st round of RBMPs, to more cost-effective measures achieving WFD objectives while reinforcing sector policies aiming at reducing resource use, increasing independence and creating local jobs.

- **The second round of RBMPs has to include an assessment of high efficiency scenarios for water, energy and land use and include all major water uses in the analysis of recovering the costs of water services.**

Nevertheless, river restoration will not happen without political prioritisation and financing. In the coming decades Europe's water infrastructure will undergo major renovation and re-designing to repair an ageing system and adapt it to a changing climate. The opportunity is to invest in a resilient water infrastructure, which restores ecosystem functions and reduces operational costs. Therefore, river restoration must be on a level playing field with grey infrastructure and its common barriers to financing be removed.

- **The second round of RBMPs has to ensure that river restoration will become an investment priority, by removing financing barriers and mapping available public funding streams, including water, energy and land use bills and EU agricultural and cohesion funds against restoration requirements and provide a financing plan.**

- 1 European Commission 2012, A Blueprint to Safeguard Europe's Water Resources COM(2012)673
- 2 European Commission 2012, COM(2012) 673, Impact Assessment accompanying A Blueprint to Safeguard Europe's Water Resources
- 3 See Eurostat data 2002-2012 for Gross inland consumption of energy, Total gross abstraction of fresh surface and groundwater; Volume of passenger transport relative to GDP
- 4 Ecologic et al, 2007, EU Water saving potential
- 5 Fraunhofer ISI et al, 2014, Study evaluating the current energy efficiency policy framework in the EU and providing orientation on policy options for realising the cost-effective energy-efficiency/saving potential until 2020 and beyond
- 6 Triple E and Stefan Scheuer, 2014, Study on Existing and Future EU Water Legislation, A report for the European Parliament.
- 7 European Commission 2012, COM(2012) 673, Impact Assessment accompanying A Blueprint to Safeguard Europe's Water Resources
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- 9 Sachverständigenrat für Umweltfragen 2014; Stickstoff: Lösungsstrategien für ein drängendes Umweltproblem
- 10 European Court of Auditors, 2014, Special Report (No 4/2014): "Integration of EU water policy objectives with the CAP: a partial success"
- 11 Sachverständigenrat für Umweltfragen 2014; Stickstoff: Lösungsstrategien für ein drängendes Umweltproblem
- 12 IEEP and Milieu (2013) *The Guide to Multi-Benefit Cohesion Policy Investments in Nature and Green Infrastructure*. A report for the European Commission. Brussels.
- 13 Guidance on Assessing Socio-Economic Benefits for better Access to Structural Funds for Biodiversity, URL: [www.surf-nature.eu/uploads/media/Surf\\_guidance.pdf](http://www.surf-nature.eu/uploads/media/Surf_guidance.pdf)

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