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**Comparative study of pressures and  
measures in the major river basin  
management plans in the EU**

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**Task 4 b: Costs & Benefits of WFD  
implementation**

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**Recommendations for  
filling the (economics)  
knowledge gap**

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## Note to the reader

This note has been prepared by ACTeon in the context of Task 4b of the EU project entitled *Comparative study of pressures and measures in the major river basin management plans in the EU*. It complements the main report prepared under this task 4b that presents the current cost and benefit knowledge available in RBMPs and accompanying reports, building on the assessment of the current knowledge base presented in this main report for identifying priorities for filling the knowledge gap. Indeed, this is seen as key to ensuring knowledge on the costs and benefits of the WFD and of water policy in general is progressively strengthened and can play its due role in supporting (MS and EU) policy.

For more information on the content of this note and on Task 4b on the costs and benefits of WFD implementation, please contact:

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## 1 Context

The Water Framework Directive (WFD) is promoting the application of sound economic principles, methods and instruments for supporting the achievement of its objectives (good ecological status) in Europe. However, at the start of adoption of the WFD, few countries had experience in water economics. Despite initial efforts by many Member States and the specific guidance on water economics developed under the CIS process, the economic knowledge in the field of water has been built only progressively and in a very heterogeneous manner throughout Europe.

The more recent River Basin Management Plans (RBMP) reported to the EC illustrate the emerging role of economics for supporting water management, the very partial economic information being reported by EU member states (MS) and the lack of transparency on results, methods and assumptions presented. As a result, building a common economics knowledge base, making direct comparative assessments of costs and benefits in different River Basins or extrapolating available results to an EU wide assessment of the costs and benefits of the WFD remains a difficult and very challenging task!

At the same time, with the increasing competition on water resources and the current economic and financial crisis, there is a strong demand from all stakeholders and in particular from economic operators for more robust economic assessments to justify water management and policy decisions.

To respond to these challenges, a specific task (4.b) on costs & benefits has been included in the EU project entitled *Comparative study of pressures and measures in the major river basin management plans in the EU*. The overall objectives of this task were to develop a knowledge base on the economic dimensions of water management (i.e. costs, benefits & financing) that would contribute to the overall assessment of the economic impact (costs & benefits) of the WFD and feed into the forthcoming EU Water Blue Print development process.

To achieve this objective, a review of costs and benefits of the WFD implementation available in RBMPs and related documents was carried out. This review helped assessing the WFD costs and benefits, highlighting in particular all uncertainties linked to such assessment along with the limited coherence and completeness of the existing knowledge on costs and benefits.

## 2 Objectives of the note

The main objective of the present note is to **identify suggestions and potential actions that could strengthen the existing water economic knowledge base** so it better support water management and EU water policy making in the medium term.

The note builds mainly on the critical review of the cost and benefit information collated from RBMPs and related documents, complemented by ACTeon's own expertise in the field of cost and benefit



assessment and EU water policy. Each suggestion or action is presented in a given template format that:

- Specifies the **type** of action (research, studies, information & communication, knowledge management, training);
- Describes in **operational and practical terms** the proposed action or suggestion;
- Specifies the **scale** at which the action would best be carried out, and by **whom** (DG Environment, CIS working group, individual MS, researchers, etc.
- Identifies possible **constraints or issues** and possible synergies with parallel initiatives that will need to be taken into account when implementing the proposed action.

### 3 Practical suggestions and actions proposed for strengthening the water costs & benefits knowledge base

The following table summarizes the main suggestions and proposed actions identified.



Proposed action	Type of action	Issues	Description	Scale of implementation	Governance	Constraints and issues	Possible synergies
<b>Development of benchmark values for key ecosystem services</b>	Applied research	The review of existing benefit studies stresses the difficulty to assess the relative value of individual services provided by aquatic ecosystems. Some of these services are combined in valuation studies, while a limited number of values often representative of a given context are available for other services. This limits the potential use of available knowledge that remains scanty and heterogeneous.	This action aims at developing new economic values for a range of selected services under different representative conditions. It builds a typology of situations (combining eco-regions and pressures?) for each selected service that is followed by the selection of representative and reference sites where detailed quantification and valuation of services is carried out. Selected services could include: self-purification, biomass production, biodiversity support...	EU for the overall framework	DG Environment & DG RTD, JRC and the EEA	The development of the typology of sites might be a challenging task. Also, agreeing on a limited number of services that are encountered in most situations in Europe might be difficult as the link between types of situations and services provided under each type might not be well known nor well documented.	Synergies are to be developed with current work by the JRC and the EEA on values of ecosystem services using “modeling” approaches. Synergies could be developed with the Ecosystem Service Partnership ( <a href="http://www.es-partnership.org/esp">http://www.es-partnership.org/esp</a> )
<b>Development of guidance in the application of the EG&amp;S framework for WFD benefit assessment</b>	Study	The potential role of the EG&S framework for assessing benefits has been raised in the context of the WFD. Clearly, this would require adaptation in the technical information collected under the Pressures & Impacts assessments so the quantification of services is systematically developed. There is already an IWRM.Net project addressing this issue (ESAWADI) – however, this project will not deliver operational solutions that can be directly used by MS.	This action builds on an expert group for developing guidance, combined with testing of recommendations of the guidance in selected site to a) mobilize local experts and water managers in testing – so awareness is raised and b) ensure the robustness of the recommendations.	EU	CIS with DG Environment support and testing in different river basins under lead of transboundary river commissions?	There might be limited interest from MS and WFD experts to expand the technical challenges of the WFD implementation – in particular when there is limited space for using EG&S quantification and values in decision making.	Synergies need to be established with the ESAWADI IWRM.Net project so this action is a clear continuation of this project’s efforts.
<b>Training RB managers in the assessment and reporting of costs and benefits for the WFD</b>	Training	The review of the existing cost and benefit information has stressed the large incoherence in available knowledge, limiting its further use be it for EU wide assessment, comparisons or transfer. Part of this might come from the limited expertise of the experts in charge of cost assessment and	The action proposes to organize training sessions on the assessment and reporting of costs & benefits	For language and availability reasons, best would be to organize training workshops at the scale of large river basin or large EU regions (i.e. Rhine,	DG Environment for supporting the development of the training material and the	If the training is organised in English, there might be difficulties in sharing methodologies with all relevant target group from all EU MS.	For cost-effectiveness reason, and to enhance legitimacy of the action, one might investigate the possibility of involving experts involved in the implementation of the MSFD with more specific



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		reporting. In addition, some countries do not report cost & benefit information because inadequate capability for carrying out related assessments.		Danube, Baltic Sea, etc.)	organization of training sessions by international river commissions?		requirements for costs and benefits assessment and reporting
<b>An internet based cost database</b>	Knowledge management	There is an increasing a) demand for cost information at different scales and b) number of studies that provide cost information on individual measures, programmes for sectors, etc. However, the information is difficult to access, not always in the right format and presented in different languages. Task 3 of the EU Pressures & Measures project has initiated work on costs – although not all cost information is available (often investment costs only). Furthermore, available cost information is often limited to financial costs of infrastructure, with limited attention given to indirect economic costs (of primary importance to the application of new economic instruments, regulation that aim at changing behavior, etc.)	The action proposes to establish a “water cost” internet platform with search capability for accessing up-to-date information on costs of measures for different sectors, regions, environmental issues, etc. The information stored in the database will be in English, with the possibility for users’ interfaces in different EU languages. Specific attention will be given to the indirect costs of measures and their assessment under different socio-economic conditions.	EU	DG Environment – with technical support of the EEA?	The need to keep the information base up-to-date requires some “human resources” (from the EEA) for integrating new information, “validating” information that might be provided by countries and experts, etc. The need to have all information of the database in English might reduce the size of the public of potential users. Attention should be given to the cost categories used to ensure coherence with on-going MSFD implementation (that uses the categories: monitoring costs, preventive action costs, avoided costs, remaining costs).	A more general “measures database” is likely to be more relevant and respond to demands of experts from different countries. The platform could build on already taken initiatives for mobilizing cost data such as Task 3 work, the Blue print modeling effort (led by JRC), etc.
<b>Development of methodologies to include qualitative values for Ecosystem</b>	Operational research or study	Many ES cannot easily (or not at all) be quantified. In many cases, values available in the literature or generated with rough methodologies are still developed with difficulties in using	The main objective of this action is to develop guidance on the integration of “qualitative values “for ES that might support decision	EU with close partnership with IRC		It is unclear today whether there is a clear demand for “ES” assessment and values in the WFD formal	Possible synergies with the implementation of the MSFD



Proposed action	Type of action	Issues	Description	Scale of implementation	Governance	Constraints and issues	Possible synergies
<b>Services (ES) into decision making</b>		them in decision making. In terms of decision making, the use of qualitative description stressing the importance of values might be a more promising alternative, in particular when linked to more quantitative assessments.	making. It builds on: a) the development of a framework and methodology; b) its testing in selected basins in close interaction with local decision makers; and c) the development of guidance that is presented at a EU workshop before finalization.			implementation. The absence of sufficient knowledge on selected ES (in particular in linking the state of an ecosystem to the presence of services and benefits) might limit the work for selected ES.	
<b>Using ES values for establishing Payments for Ecosystem Services (PES)</b>	Research	The ES values developed under the WFD implementation can also be relevant to the establishment of PES, an instrument that receives increasing policy attention. There are however very few good examples of using the assessment of ES and their economic values for establishing the terms of contract of the PES. Indeed, payments are most often defined based on "income losses" by the service provider without accounting for ES values created.	The objective of this action is to illustrate how benefits/ES economic values can help defining the terms of contract (in particular the financial flow) for a PES. It builds on a literature review, the review of experiences elsewhere (including outside Europe), the (ex-ante) assessment of future potential PES, and the development of recommendations. Focus could be in the first instance on natural water retention measures and on the role of PES in supporting the implementation of larger scale projects and the coordination among local actors.	Local/national scale (depending on interests for PES), with EU for knowledge sharing	See previous column	Although widely discussed in research and in developing countries, the interest in PES by policy makers remains limited in Europe today. Many so-called PES schemes are not really PES (but contracts for reducing pressures). Thus, some clarification on the concept and its implications is required prior to embarking on research on this. Guidance on PES in general (including the issue of values) could be considered, because of the limited experience on this topic in Europe.	Synergies could be developed with some partners of the Ecosystem Service Partnership ( <a href="http://www.es-partnership.org/esp">http://www.es-partnership.org/esp</a> ) interested in PES.



