

*Policy brief No. 2*

Actions for more effective water  
resource management and policies  
delivering multiple ecosystem service  
benefits – Lessons learnt for the  
Baltic Sea Region

Deliverable 6.4

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## ***Policy brief No. 2:***

# **Actions for more effective water resource management and policies delivering multiple ecosystem service benefits – Lessons learnt for the Baltic Sea Region**

*The BONUS funded project MIRACLE highlights the importance of a coordinated approach of cross-sectoral Baltic Sea Region (BSR) development programmes where funding is pooled for problem solving through river basin and sub-catchment-based management priorities, rather than sectoral support programmes. Building trust between different sectors and actors through bottom-up participatory stakeholder co-inquiry processes creates a basis for an active role of civil society and private sector, which increases the scope for innovations in water resource management and related policies. Creating local discussion forums and regional platforms will facilitate systematic communication across sectors.*

### **Context**

Eutrophication remains one of the biggest challenges facing the Baltic Sea, despite the significant progress that has been made in reducing the loads of nutrients through improved wastewater treatment. The main sources of nutrients (nitrogen and phosphorus) released to the sea are waterborne loads from rivers in the BSR, including diffuse and point sources from mainly agriculture and urban sectors. High runoff and flooding episodes are considered to be a key driver of nutrient leaching, which is predicted to be further exacerbated under climate change.

The process for planning policy actions to reduce nutrient loading and flood risks in the BSR is characterized by a top-down process of planning from the EU, national and regional levels by state actors from agencies and ministries and scientific experts. Measures are typically focussed on the provision of single ecosystem service benefits in accordance with the objectives of the respective sectoral policy, while financing multiple services at the same time is usually not promoted within EU financing schemes such as the European Agricultural Fund for Rural Development (EAFRD). Local conditions and the needs, knowledge and initiatives of farmers and other state and private sector actors are not sufficiently taken into account in the planning and design of measures. Significant changes in water resource management are required, in particular, bringing on board a broader set of stakeholders across different levels and scales, which can enable a transformation in practice that can reduce nutrient emissions to the Baltic Sea and simultaneously foster multiple benefits - biodiversity and habitat conservation, provision of pollination services, maintenance of soil fertility and improved recreational opportunities in local contexts. In addition, with more extreme weather events predicted in the context of climate change, the need for increased flood risk reduction and water scarcity management (e.g. water for irrigation) may become more important.

The lessons learnt summarised in this policy brief are based on the results of work undertaken in the BONUS MIRACLE project. This included a social learning process with a diverse set of public, civil society and private sector stakeholders in case areas across the southern BSR (Berze River, Latvia; Helge River, Sweden; Reda River, Poland; Selke River, Germany). During the process, alternative pathways and actions were explored for the provision of multiple ecosystem service benefits at the local level. A BSR learning workshop was carried out to enable co-learning among researchers, policy-makers, and practitioners generating suggestions for how to adapt water resource management in the BSR.

### **Increasing coordination between policy frames in the development and funding of programmes of measures**

As the management of nutrient loading to the Baltic Sea is ultimately a shared responsibility of all BSR states, greater cooperative action is warranted. This includes targeting nutrient management measures to priority BSR landscapes, river basins and sub-catchments through joint transnational programmes of measures within the context of the EU Strategy for the Baltic Sea Region (EUSBSR) macro regional strategy

and through the pooling of funding using European Structural and Investment Fund (e.g. European Regional Development Fund, European Agricultural Fund for Rural Development) instruments. At the national or sub-national level, better coordination and targeting of water management measures could be achieved through the incorporation of a river basin-based approach or sub-catchment programme of measures within the Rural Development Programme (RDP) based on water management priorities identified in River Basin Management Plan (RBMP) and Flood Risk Management Plan (FRMP). Such an approach would be targeted at addressing common issues across sectors instead of issues within sectoral silos. To ensure a stable source of funding for RBMP and FRMP measures, opportunities to earmark a share of the national RDP agri-environmental budget for catchment-based management could be investigated. Further coordination between policy frames in the development of programmes of measures could be achieved by using common criteria such as soil type, nutrient retention capacity and topographic characteristics to spatially target agri-environmental and water management measures in the RDP and RBMP.

Coordination of cross-sectoral BSR policy programmes to pool funds would provide opportunities to earmark a share of national programme budgets for river basin and sub-catchment-based management. Decisions on funding allocation could be delegated to RBMP and FRMP stakeholders. Similarly, opportunities for pooling funding from the European Structural and Investment Funds (ESIF), including the European Agricultural Fund for Rural Development (EAFRD) to address common water resource issues (priority landscapes, river basins, sub-catchments, sea sub-basins, etc.) identified in the EUSBSR and the HELCOM Baltic Sea Action Plan (BSAP) could be investigated. Greater transnational cooperation in funding and targeting initiatives could increase the effectiveness of nutrient management measures delivering multiple ecosystem service benefits. In the BSR, Managing Authorities' networks have recently been created on a voluntary basis for all ESIF funds (European Social Fund (ESF), European Regional Development Fund (ERDF), EAFRD and European Maritime and Fisheries Fund (EMFF)), reflecting the need and wish for a stronger macro-regional cooperation amongst BSR countries. This includes, among other things, facilitation, on a voluntary basis, of the funding of transnational collaboration by national and regional Operational Programmes to support the activities of the EUSBSR.

### **Building trust between different sectors and actors**

Highlighted in the four cases as well as in the BSR learning workshop was the importance of close and trusting cooperation between stakeholders from the start of the development phase of strategies and objectives at the BSR level to scheme and measure development at the local level. Changes in institutional settings to foster close cooperation between different stakeholder groups can be achieved through bottom-up participatory stakeholder co-inquiry processes recognizing and appreciating a wider set of objectives and interests. A more active role of the civil society and private sector can increase the scope for innovations in water resource management and related policies. Intermediaries with the ability to integrate actors from different sectors across scales to build coalitions with common objectives play a critical role in trust-building during the co-inquiry processes. The successful implementation of such bottom-up participatory stakeholder co-inquiry processes requires improved means of communication between actors and sectors. Regional platforms and local discussion forums can facilitate systematic communication across sectors. Experience in the MIRACLE project confirmed the ability of co-inquiry processes to foster co-creation of knowledge and to reveal new insights in terms of priority actions for more effective water resource management in the diversity of river basins that constitute the BSR, which then in turn can feed into the development of governance and policy innovations.

### **Lessons learnt**

To contribute to further improvements in the effectiveness of agricultural and environmental policies in ensuring multiple ecosystem service benefits, a number of lessons can be derived from the co-learning processes enacted in the MIRACLE project:

- Coordination of cross-sectoral BSR policy programmes to pool funds to address river basin and sub-catchment-based management priorities, rather than sectoral support programmes, strengthens the delivery of multiple ecosystem service benefits.

- Building trust between different sectors and actors through bottom-up participatory stakeholder co-inquiry processes, creates a basis for an active role of civil society and private sector, which can increase the scope for innovations in water resource management and related policies.
- Such bottom-up participatory stakeholder co-inquiry processes can be strengthened by regional platforms and local discussion forums, which will also facilitate systematic communication across different sectors.
- Diversify stakeholder co-inquiry processes to reformulate problems and identify common goals of all types of actors with particular stakes and interests in water resource management.

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**Further reading:** Do, T., Tonderski, K. & Powell, N. (2018). REPORT ON BALTIC SEA REGION LEARNING. Deliverable 5.5, BONUS MIRACLE project. Available from <http://www.bonus-miracle.eu/>

### **What is MIRACLE?**

*MIRACLE approaches ecosystem services by policy instruments that acknowledge interlinkages between eutrophication, flood management, biodiversity, coastal water quality & human health. The objective is to identify, measure and recommend cost-efficient solutions in the Baltic Sea region, through modelling, visualisation, stakeholder dialogues and social learning. MIRACLE also identifies how institutional settings have shaped governance structures and policy instrument choices and provide road maps on opportunities for improved integration of agricultural, environmental and risk management policies adapted to a changing climate. By creating a forum for dialogue between researchers and stakeholders in case study areas in Latvia, Poland, Sweden and Germany, consensus building and priority settings are used to develop roadmaps and new models of governance from trade-offs between different objectives. Cost-benefit analyses of priority measures are linked to interactive modelling of sources and the magnitude of eutrophication and floods in a changing climate. Impact scenarios of measures suggested by stakeholders to reduce floods and eutrophication are modelled, and the impact on e.g. biodiversity, human health and biosecurity assessed. Finally, recommendations for innovative governance structures and instruments are formulated, including payment for ecosystem services, in order to improve incentives for provision of sustainable ecosystem services.*

**See the project website ([www.bonus-miracle.eu](http://www.bonus-miracle.eu)) for additional information and documentation.**



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