

Policy brief on integrated rural water management

Local cross-sectoral joint actions are needed to address complex climate and water challenges



Baltic Marine Environment
Protection Commission

Policy briefs



Current situation

While there has been progress in improving rural water management in the Baltic Sea region, the actions taken are yet not reflected in the quality and ecological status of many surface waters. The implementation of water management policies varies in the different Baltic Sea region countries and the drivers for change are different between countries, as are the actions recently taken in rural water management.

Denmark with its large proportion of agricultural land has extensive experience in attempting to combat severe nutrient enrichment and has initiated targeted national programs for water retention measures, land consolidation and mitigation of greenhouse gas losses from agricultural lands. Poland has, during the last years,

suffered from severe drought conditions and therefore has now directed support for actions and investments to secure water resources for agriculture. Poland directs support for water management in rural areas, in addition to the state budget, through the Common Agricultural Policy and the National Recovery and Resilience Plan. It also promotes the activation of inhabitants of rural areas towards taking actions to improve water management. Germany has repeatedly revised its national Fertiliser Ordinance in order to ensure the achievement of the provisions of the Nitrates Directive and to lower nitrogen inputs into surface waters. In addition, Germany has recently adopted a National Water Strategy that is based on the results of a two-year National Water Dialogue and takes a holistic view, addressing the chal-

lenges facing water management in Germany up to the year 2050. The strategy's aims include the following: ensuring that groundwater, lakes, streams and rivers are cleaner; preventing further overuse of and strain on water resources; ensuring that excellent wastewater disposal continues to operate and adapting water management to the impacts of climate change and changes in demographics. Latvia, Lithuania and Estonia develop actions through the CAP and the Rural Development Programmes (RDP). Finland and Sweden provide support outside CAP/RDP to support bottom-up local water management actions in addition to CAP/RDP. In Russia, especially Kaliningrad has extensive plans for expanding agriculture and presently a large drainage restoration project is implemented.



In HELCOM, the issue of rural water management and agricultural drainage was raised in the 2013 Ministerial Declaration and has since been addressed by the HELCOM Agri Group. The 2021 Baltic Sea Action Plan includes the action “Apply innovative water management measures where appropriate, for example, lime filter ditches, sediment traps and controlled drainage, and nature-based solutions, such as two-level ditches and constructed wetlands, when upgrading and renovating agricultural drainage systems” (E19). Other related aspects are included also e.g. in the 2021 BSAP actions strengthening cooperation with river basin management authorities.

The local level has been identified as an effective scale for solving complex problems and taking cross-sectorial joint actions. All countries have agri-environment programmes addressing the individual farms. However, the local cross-sectorial joint actions are in most

cases poorly or not supported at all. Nevertheless, the interest for such initiatives is growing, more so in countries where other financial resources and mechanisms complementary to the CAP financing can be deployed.

Some countries have invested in new services to facilitate local water management implementation called “catchment officers/facilitators/experts”. The interest from all countries for learning more about such services has been very high.

Problems

The agri-environment support is predominantly directed to single environmental challenges like eutrophication or biodiversity etc. However, from a farm and/or catchment land- and water management perspective, the challenges are integrated. Secure food production, access to clean water, soil fertility, biodiversity and climate change are inter-

linked. Implementation of such policies are rare but slowly growing and taking up speed in the Baltic Sea Region.

There is a lack of leadership especially on national and central levels on advocating for more holistic water management approaches. Such leadership can, however, sometimes be found on the local level. In general, there is still a divide between agricultural and environmental interests although the divide is narrowing. Leaders within organizations, authorities and politics bridging that divide will be front-runners in opening new opportunities for sustainable rural societies.

Farmers have a strong interest in water management and nature. However, some agri-environment payments have few applicants. The level of financing for agri-environment programmes does not compensate enough for complicated bureaucracy and long-term commitments but the interest is there.

Key messages

CHALLENGES



Lack of strategic water governance vision on the systems level

There is a need for a balanced and systematic transition towards a new action-oriented framework, integrating climate- and water policies for intensively cultivated agricultural landscapes of the Baltic Sea region. A transition securing food production, ecosystem services and rural sustainability in a changing climate is needed.



Continued separation and fragmentation of policies

There is concern that a continued separation of policies and fragmented implementation will be extremely expensive, reduce food production and security, deteriorate ecosystem services and hamper innovation in agricultural landscapes. Moreover, the eutrophication of inland waters and the Baltic Sea will continue. The local level motives and progress in action are not yet reflected in policy.



Lack of differentiation in action and support levels between intensively cultivated high-risk areas and less intensively cultivated areas

The intensity of agriculture varies significantly between regions. The nature and state of the local ecosystems determine the responses needed and expectations for impact. Efficient water action strategies include site-specific allocation of resources and, most importantly, building the commitment from farmers and landowners.

SOLUTIONS


Leadership and strategic vision – inter-ministerial coordination/commission

Coordination should be enhanced, and inter-ministerial commissions initiated for water- and food security in a changing climate. The aim would be to build strategic awareness, knowledge and vision, especially concerning climate change induced risks and impacts on water availability (ground- and surface), water quality, food security and ecosystem services. In many cases, leadership and strategic vision is present at the local level but is lacking on governmental and ministerial levels.


Climate and water high risk areas – implementing multiple policy areas and security

There is a need to adapt to the climate change as part of future water management in the agricultural landscape. This finding has emerged from the priorities of farmers/landowners and from the priorities of municipalities and local governments. Their challenges with water management are clearly broader than nutrient management. The sensitive climate- and water high risk areas should be identified and, as part of the new National CAP Strategic Plans, innovative pilot projects should be developed. The aim would be to effectively steer resources and support towards the most sensitive and high-risk areas and thus improve participation and efficiency in programme implementation. The selection criteria need to integrate cross-sectorial assessment and can include environmental pressures, food production intensity, climate risks, drought/flooding, particular local values (landscape, environment) and socio-economic factors.


Farmers motivation and responsibilities – financing, incentives and leadership

In some cases, there is only weak interest from the farming/landowner community to join agri-environment programs. This is not due to poor interest from farmers as most farmers have a strong motivation and interest for nature and water. The low interest is emerging more due to the unmotivating incentive structure like financial compensation and/or contracts, as well as persistent mistrust on a system level. The incentive structure should be updated especially in climate and water high risk areas to ensure engagement and commitment from farmers and landowners. Farmers and landowners can take a more leading role if the incentive structure and motivational factors are suitable. This has been demonstrated in some case areas around the Baltic. The farmers' own interest, their umbrella organizations and advisory services also have an important role in taking a more leading role.


Specific local catchment support programs – financing for cross-sector local collaboration

Catchment initiatives and local cross-sectorial cooperation play an important role. All such catchment initiatives are important – however, the local conditions vary substantially between countries. Therefore, the organization and implementation will and should be different between countries. Additionally, what is innovative or understood as non-innovative differs between countries.

However, emphasizing catchment initiatives involving innovation and living labs from the local context will be one of the most important drivers for change for the next generation programmes. Present programmes are too bureaucratic and not flexible enough to support innovation and development on the local scale. Flexible financial mechanisms should be launched to support local catchment initiatives. Catchment initiatives could be supported depending on high risk or low risk areas. Financial mechanism especially targeted to facilitate cooperation between actors and for hiring of expert support and consultancy could be established.


Catchment officers and water expertise – new competencies and expertise required

There is a significant lack of capacities and competencies to support a transition towards more holistic water and landscape management. There is a need to expand the existing agricultural advisory services with competencies in integrated water management.

New services, like catchment officers or similar water management experts should be launched and the relevant experts could be employed by agricultural advisory services, municipalities or related organizations. The new services include a combination of expertise, both in water management, like “catchment officers” and “water legislation experts”. Such services form a prerequisite to support the transition and secure the involvement of local actors.


Large-scale investments – climate and water collaborative investments

There are substantial difficulties in development and financing of large-scale climate- and water infrastructure investments in agriculture. This issue concerns international funding agencies and banks (such as NIB, NEFCO, EIB), and other financing institutions alike. There is a need for investment and business cases to support field infrastructure investments like large drainage/water provision projects, lake and stream restoration projects, and on the other hand, large wetland projects, also biogas plants and biorefineries. From the farmer's perspective, flexibility is needed to allow added value through collaborative investments, support to coordination and planning.

SOLUTIONS


Role of local authorities and municipalities – public and private partnerships

Public and private partnerships are needed to integrate water- and land use management in spatial planning and local action. Aim would be to provide leadership and decision support to local actors in the transition process. While there is interest from local authorities and municipalities, they in general lack capacities and resources to work with rural water management. Local authorities, especially in climate and water hot spot areas should be provided with the resources, mandate and competence to undertake this task.


Learning for action in the Baltic Sea region

Agri-environmental conditions are special in the Baltic Sea region due to the large drainage basin, quite intensive agriculture and long water exchange time of the Baltic Sea. Continued co-operation is needed to further exchange experiences and leverage from the similarities and differences between countries towards more effective programmes. There is good potential for further exchange of experiences between the countries and a closer cooperation between larger development projects and existing national and international bodies. Such interesting topics for continued cooperation are:

- Providing frameworks and guidance for national water management within the CAP national Strategic Plans;
- Identifying and designating “Climate and water hot spot areas”;
- New services for climate- and water management within agricultural advisory services and consultancy.


Research for integrated climate and water risk management

Research is still very much focusing on single agri-environmental challenges. Research programmes could be initiated to support a balanced transition of food and water management systems including other sectors, e.g. financial and trade, to mitigate and adapt to the climate change. To balance the emphasis on natural sciences, a social science perspective should be incorporated. More applied research financiers such as Integrated LIFE and Interreg Baltic Sea Region Program projects should be involved as well as research-oriented financiers like BANOS and HORIZON EUROPE. The Baltic Sea region stakeholders should seek to introduce the specific challenges of the Baltic Sea region water management and suggest topics for the EU common research agenda.


Better site-specific data and decision support for actors on the local scale

The knowledge about pressures and effect of different forms of land use in the catchment area is still inadequate to establish effective approaches to minimize land-based waterborne pressures. On the other hand, targeted site-specific management requires better data and the use of advanced decision support tools and methods.

There is a gap in the availability of digital decision support tools. In particular, there is a lack of digital decision support tools with maps etc. on the catchment or farm scale. Relevant local information with maps etc. for catchment officers, farmers and other local actors is highly requested. Most urgent is the need to better target implementation of agri-environment measures and to implement the right measure at the right place. The environmental performance of green water management infrastructure measures, for instance wetlands, varies significantly depending on the site-specific conditions.

References

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