

Water Management and Agriculture Workshop

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Tisza River Basin Case Study on Water and Agriculture



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Outline of the Case Study

1. Summary
2. Setting the Scene - Addressing common challenges of agriculture and water management
3. Present land uses and available water resources (effects of irrigation on surface and groundwater)
4. Relevance of stakeholder involvement in the dialogue between water management and agriculture
5. Good practices/samples from national level
6. Conclusions and recommendations
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Background information



The report is organized according to the Tisza Group agreed outline, and based on:

- the National Reports prepared as basis for the present case study,
- the Background paper on irrigation and land use mgt in the Tisza River Basin as an input to the case study

The objectives (1)

First, it provides an overview of the consultation process in the Tisza countries regarding the following questions:

- Are the existing agricultural policy structures and ongoing agricultural measures sufficient to reach the objectives outlined in the ITRBM Plan?
 - Which kind of further steps are recommended to achieve better correspondence between agriculture and water management sectors and to achieve common objectives?
 - What kind of additional stakeholder dialogue would be necessary between agriculture and water management sectors?

The objectives (2)

Second, it provides a summary of the findings and results from each Tisza country in the implementation of measures highlighted in the Integrated Tisza River Basin Management Plan, especially the Water Framework Directive, Nitrates Directive and the Best Agricultural Practices.

Third, it will prepare the participants at this Workshop for the discussion by illustrating the challenges, problems and options for accelerating the implementation of agricultural measures in the Tisza sub basin.

Setting the Scene

At the Tisza river basin level, **agriculture is an important driver** which determines pressures on water resources and which generates point and diffuse sources of pollution.

Agriculture is the major source of pollutants, including natural and chemical fertilizers and pesticides application as well as effluent from huge pig farms and agro-industrial units.

Tisza River Basin



Setting the Scene: Policy measures

The Case Study includes a **comprehensive overview and discussion of the legal arrangements**, including EU directives, policies, programmes or other related legal initiatives, relevant to the agriculture and water

Outcomes:

The countries in the Tisza basin have taken great efforts to adopt, adjust and implement the EU Directives in support of implementing of measures to reduce the agricultural pressures on water.

The main initiatives are grouped around the WFD, Nitrates Directive and Common Agricultural Policy.

The EC Common Agricultural Policy is the single biggest driver influencing agriculture, and the Rural Development Measures implementation should be linked with the WFD to avoid the degradation of water due to agricultural activities.

Measures to reduce pressures from agriculture

The measures within the TRB addressing pressures from agricultural activities are built in the **packages of measures addressing nutrient pollution**, following the same concept as for the entire Danube River Basin.

The assessment of nutrient pollution sources undertaken within the frame of the UNDP/GEF Tisza project (2009) is a **valuable source of information for agricultural pressures**.

Common challenges of agriculture and water management



The most relevant **common interests** are related to the achievement of sustainable development, monitoring activities of water bodies for implementing water and agricultural policies, integration across water and agricultural policy areas, territorial water management and flood management.

The **shared conflicts** include issues linked to affordability of financing, water management and conservation and acceptance by the farmers of agri-environmental measures to achieve good water quality.

Farmers do not see the benefit of environmental measures in several cases

Environmental benefits are highly dependent on market factors

Present land uses and available water resources

Main points of the assessment

Main water users: public water supply, irrigation and industrial purposes, but also for other uses, such as agriculture, fishing and recreation.

Integration of water quality and quantity in land and water planning is an essential issue

The increases in water use in the Tisza River Basin will be an additional pressure, particularly in the summer low-water period

Most of the countries reported that however the irrigation system is set up in larger areas and due the economic reasons they are not used/utilized

There is a great uncertainty about the water demand and the required water quantities abstraction for irrigation by the end of the next planning period

Limited data were provided either based on expert judgment or extrapolated according to the potential area to be irrigated in the future

Stakeholders involvement

The case study includes an **overview** of the dialogue between water management and agriculture, with illustration of good practices.

The main conclusions are:

- The dialogue between the water and agricultural sectors focuses on the implementation of EU legislation, preparation of national legislation, development of strategic and technical documents, including the provision of advisory service to the farmers
- Communication between these sectors depends on type of activity and following an agreed procedure.
- Integration across policy areas and the active involvement of all stakeholders are important.

Illustration of different views!

The view of water management experts

Water is polluted by nutrients, dangerous substances from application pesticides and plant protection products, and in some cases water quantity can be a problem due to over abstraction of water.

The main reason is in the improper land management and input management – that creates risk of soil erosion and nutrients/pesticides run off and leaching.

The view of agriculture experts

Realization of measures to maintain/improve water quality leads to decrease of their benefits. Many preventive measures to protect water quality, especially within NVZs they see as discriminatory or disadvantageous especially in the current economic period.

Recommendations (1)

On policies

Need to have more stringent regulation in national and/or basin wide scale to reach good water status

Land use policies need to be integrated in the river basin management plans.

It should be a better coherence between farming policies and the WFD.

Integration of water quality and quantity in land and water planning is important.

On measures

The Rural Development measures should have clearly expressed objectives and consist of clear requirements at a farm level.

The role of best agricultural practices in meeting the WFD objectives needs to be acknowledged

Agri environmental measures need to be adapted to the type of farming practice (arable, dairy), agriculture intensity, climate influence and type of soil, as well as to the organizational circumstances and local conditions.

Recommendations (2)

On implementation

The role of markets at a national level - **taxes on agricultural inputs** that cause diffuse pollution such as pesticides and fertilizers, **would encourage their more efficient use and reduce pollution.**

Training and information must be made available to farmers.

The **cooperation of stakeholders** from agricultural sector and water managers on the inter-linkages between agriculture and water management (agriculture and environment) should be strengthen.

It is important to highlight the need to improve the **data and information on water uses**, which would facilitate the proper water balance assessments and the definition of the minimum flows for ecological quality and pressure criteria.

Recommendations (3)

There is a need to improve information on the planned water abstraction and land use practices changes, which are required in the integrated river basin management activities in the dialogue between agricultural and water sectors.

Supplementary data from countries will also facilitate a better perception of the need to implement agricultural measures that contribute to reach the WFD objectives in the TRB as well in the DRB.

Best practices

Large number of best practices presented by the countries in the TRB

All success stories show practical ways of implementation of the best agricultural practices and their experiences should be further disseminated within the Danube River Basin!

Quote from the Report on irrigation and land use mgt



The sustainable water quantity management would generate multiple benefits for water quantity and quality within the region and result in:

- Good status of the waters
- Practical realization of integrated water management in the basin.

Tisza Case Study 2012:

**“Present land uses and available water resources,
Effects of irrigation on surface and groundwater”**

Assessing first results

The implementation of the Nitrates Directive in the EU MS, an improved application of the concept of BAP in Non EU MS and the reductions in nutrient pollution achieved in the UWWT with N and P removal for agglomerations >10,000 PE will reduce the nutrient pollution considerable!

Thank You!





Questions

Which are the basic measures contributing to nutrient reduction in your country in the TRB?

How the synergy between the agricultural and water sector can be improved in your country in the TRB?

How the dialogue between the agricultural and water sector is achieved in your country?

Which kind of further steps are recommended to achieve better correspondence between agriculture and water management sectors and to achieve common objectives?

This will be achieved through integration across policy areas and the active involvement of all stakeholders.