



Protection and Sustainable Use of the Dinaric Karst Transboundary Aquifer System

## **TDA-Transboundary Diagnostic Analysis: *Legal and Institutional Framework and Policy***

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# Methodology

- National reports on legal and policy frameworks
- Questionnaire on GW management issues
- National SWOT analyses
- Regional SWOT analysis
- Analysis of the international commission/authorities activities and international law and guidelines on transboundary aquifers
- Regional overview of legal and institutional framework and policy

# Questionnaire on GW management issues 1

- National strategies for water management in DIKTAS countries
  - goals and requirements regarding groundwater
  - goals for transboundary waters, particularly groundwater
  - harmonization with other sectoral related strategies
- State of the implementation of EU directives in national legislation
- “User/polluter pays principle” and the principle of recovery of the costs in national legislation
- Existence of legal or policy document containing provisions on integration of environmental and resource costs into the development of pricing policies
- Approach for defining (qualitative and quantitative) status of groundwater bodies
- Status of development of the national river basin management plans
- Program of measures in the river basin management plans
  - measures which are planned to be implemented for groundwater protection

# Questionnaire on GW management issues 2

- Existing system of protection of well fields and springs
- Legal base for the existing practice of groundwater protection in karstic areas
- Legal requirement for implementation of any kind of remedial measures in the zones of sanitary protection
  - remediation measures of contaminated soil and groundwater
- Way of treatment of the areas intended for the abstraction of water for human use (DWPA) specified in the regulations or strategic documents
- Inclusion of DWPA and sanitary protection zones of well fields within spatial planning documents
- Legal base for establishment of groundwater monitoring, existence of criteria related to conceptual models, representativeness of the monitoring places, selection of parameters

# National SWOT analyses

- SWOT: Strength, Weaknesses, Opportunities and Threats
- Base for national SWOT analyses:
  - national reports on legal and policy frameworks
  - questionnaire on GW management issues

# Regional SWOT - Weaknesses

## Institutional aspects

- Gap/overlapping in coordination among institutions - between local and central government
- Weak institutional setup for water (particularly groundwater) monitoring
- Most countries lack qualified human resources in water sector administration
- Poor performance of law enforcement with regard to application of water management principles
- Slow process of development of RBMP
- Implementation of Rulebooks on sanitary protection zones is weak
- Lack of integrated water resources management approach in groundwater investigation

# Regional SWOT - Weaknesses

## Legal aspects

- Current regulations have many gaps and ambiguities linked to groundwater monitoring, due to unclear criteria related to development of conceptual model, specifically on: use of appropriate indicators/parameters of groundwater status, choice of measurement points, the frequency of monitoring etc.
- Lack of consideration of groundwater dependent ecosystems in national legislations
- Areas (water bodies) intended for the abstraction of drinking water are not properly defined in legislative documents
- *Water Management Strategy* and *Water Basin Management document* (Montenegro) are only partly harmonized with other sectoral (national) strategies, which may threaten the implementation of the (ground)water protection measures

# Regional SWOT - Opportunities

## Institutional aspects

- To have representatives in CIS working groups that create policy and develop guidelines for (ground)water management at EU level
- To build interdisciplinary research topics at national and transboundary level in order to meet the water and groundwater management needs
- To develop education system for the public administration (working on (ground)water management issues) in cooperation with decision-makers, legislators, NGOs, research institutions and Universities
- To initiate institutional effort for support of better communication and dissemination of knowledge and experience between decision-makers and legislators and water scientists and experts working on national or international scientific or professional (ground)water projects
- To promote investment in the field of wastewater collection and treatment for large and small agglomerations as well as for drinking water supply systems
- To improve the program of groundwater monitoring taking into consideration the requirements of EU directives



# Regional SWOT - Opportunities

## Legal aspects

- Areas (water bodies) intended for the abstraction of drinking water (drinking water protected areas) should be properly defined in legislation and in principle be distinguished from sanitary protection zones
- Consideration of remediation of contaminated groundwater or soil in legislation
- To improve information basis and strengthen application of public participation by encouraging and supporting activities that contribute to the development and implementation of environmental policy
- To reach an agreement (at DIKTAS level) for establishing multi-country consultative body operational for improved management of the transboundary waater resources
- Program of measures at DIKTAS level should be defined on the basis of application of economic criteria (cost effectiveness) and principles of "combined approach" and "best environmental practice"

# TDA – institutions involved in the management of water resources

- Water issues are covered by different ministries and institutions at the different administrative levels
- Coordination and clear division of responsibilities among the institutions at different administrative level are not properly defined
- Level of law enforcement is not sufficient
- Countries have designated responsible institutions for implementation of EU water acquis
- Need for capacity building and education of personnel on following issues
  - characterization of water bodies
  - establishment of reference conditions
  - analysis of human impacts
  - application of the ‘combined approach’ principle
  - groundwater and surface water monitoring
  - development of river basin management plans and programme of measures

# TDA – policy and legislation

- Water management policy documents (strategies)
  - differ in the level of harmonization with the requirements set in the WFD and the GWD
  - are only partly harmonized with other sectoral strategies
- Fundamental principles, objectives and measures are transposed from the EU Directives in national legislations
- “Polluter pays” principle and the principle of “recovery of the costs” are promoted in legislative documents
- Principle of cost recovery is not fully transposed in national regulations and water management practices
  - environmental and resource costs are not implemented in water pricing policies

*Main shortcoming of the legislative framework at the DIKTAS level is an underdeveloped system of by-laws and insufficient implementation of present legislation due to lack of human resources and financial means*

# TDA - challenges to water resources governance

- Main challenges to effective groundwater management at the regional level are related to:
  - harmonization of the water sector with other sectors
  - implementation of the IWRM principles in groundwater governance
  - capacity building for public administration and
  - strengthening the role of public participation in taking decisions
- Attention of the water governance bodies has to be turned to the management of water demand by the following measures:
  - water pricing mechanisms
  - reduction of water losses
  - water reuse and recycling
  - increasing the efficiency of domestic, agricultural and industrial water uses, and
  - water saving campaigns supported by educational and awareness-raising activities

# TDA - challenges to water resources governance

- Program of measures at the transboundary level should be:
  - implemented within the time frame which is realistic and acceptable for countries and
  - defined on the basis of application of economic criteria (cost effectiveness) and principles of "combined approach" and "best environmental practice"
- Transboundary agreements on the measures to be taken are needed and political commitment to their enforcement, and sustained cooperation to monitor their effectiveness
- Proposal: to establish Dinaric Karst Aquifer System Water Partnership as a platform of stakeholders for better policy/science interfacing
  - Purpose: to enable a better communication between scientists, legislators, decision-makers and those working in the implementation of IWRM principles

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**Thank you for your attention**

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