

TRANSBOUNDARY REGIMES AND THE ROLE OF INFORMATION

The EU Water Framework Directive is an important driver for water policy development and water management in the EU Member States. In the coming years, River Basin Management Plans must be developed by the Member States to describe the actual and planned management of the River Basin, in cooperation with all Member States that share a River Basin. This places specific requirements on the institutional arrangements as well as on the way in which information is handled and disseminated on top of the national water management arrangements. The national level must be supplemented by a transboundary component that not only complicates management in terms of adding interfaces, but also adds a new level of complexity in terms of differences in legal, cultural, historical and institutional settings. This policy brief will provide insights into and recommendations on how to cope with water management in a transboundary setting, based on recent EU research on this topic. While many insights are based on the WFD implementation, the knowledge obtained is also of relevance to other, non-European international River Basins (including in the context of the EU Water Initiative).

Background

The EU Water Framework Directive (WFD) largely determines water policy development and water management in the EU Member States. In the period up to 2009, water policy in the European Union will be dominated by the development of River Basin Management Plans (RBMP). These RBMPs contain the environmental objectives for the River Basin as well as the measures and controls taken or identified to reach these objectives. Article 13 of the WFD and the accompanying Annex VII describe what RBMPs should contain, how they should be produced and how often they should be reviewed. Among other things, the

article prescribes that for an international River Basin District (RBD) the riparian Member States must coordinate with one another in order to produce a single international River Basin Management Plan.

A recent study showed that 30% of prospective RBDs are international. Area-wise, international RBDs constitute 66% of the total area of prospective RBDs (see figure). This underpins the importance of transboundary cooperation between riparian countries in the collective management of a river basin. It implies that national issues concerning RBDs can no longer be dealt with on a national basis but should be negotiated with other countries.



Figure 1: Prospective river basin districts (Nilsson et al 2004).

This policy brief touches upon various issues that need to be dealt with in transboundary cooperation, and descri-

bes the role of international institutional regimes and of information in transboundary settings. Regimes use, produce and are based on and result in information. By combining these two aspects of institutional regimes and information, a more complete view of transboundary water management emerges. From this perspective, it is important in transboundary settings to analyse the ways in which formal and informal actors cooperate in transboundary regimes, how policies are developed and implemented, the existing and developing legal framework, the financial basis and the use and production of information within transboundary regimes. A specific focus should be placed on the analysis of information input to decision-making processes in international water management and its interactive relationship with the actors in the process (actors use information for their objectives but are also influenced by incoming information). The analysis below is based on a review of EU research in the field of Integrated Water Resources Management (IWRM), conducted within the NeWater project. A review of existing transboundary water management structures and practices in transboundary water basins in Europe demonstrated that organisational and institutional aspects of implementing EU water policy (political, research, administration, etc.) need to be developed. Problems of communication and information



exchange between different levels of governance as well as across borders, not only within the EU but also outside it, present major difficulties for water policy implementation.

The role of international regimes in transboundary settings

International regimes can be defined as the ensemble of institutions around an international issue, such as the management of an international river basin. Different regimes exist, depending on different cultures, governance, socio-economic settings, languages etc. The synthesis of European research should provide an overview of which "institutional designs" can be labelled as integrated in terms of being able to apply IWRM, thereby investigating the power play between countries and diplomacy/negotiations, the role of informal agreements and international conventions (whether ratified or not), etc.

Water management in a transboundary context is much more complex than water management within one country. Different countries have their own distinct political and economic interests, histories and cultures to manage transboundary waters. The management of transboundary water is therefore inherently political, and the political will from the governments of all riparian countries is a prerequisite for the successful initiation and continuation of any transboundary cooperation. This political commitment to international cooperation by the transboundary states, however, is weak. Moreover, when there is a common interest for EU countries to implement the WFD, especially on the EU's fringe, this shared interest is lacking, and sometimes disputes even exist over water management issues, complicating transboundary water management.

Until now, transboundary aspects seem to be seriously underestimated in WFD implementation. The requirements contained in the WFD text concerning transboundary RBDs are 'softly' defined, while the ambitions of holistic management and administration according to river basins are high. In the face of the large number of transboundary RBDs, there is a need for more formal arrangements and procedures between the riparian governments, as well as between governments and stakeholders, to implement the WFD. This should include responsibilities and work procedures.

It is highly important, and recommended by the WFD, to involve multiple stakeholder groups in the development and implementation of EU and national water policies with the aim of developing a social learning process. This may not always be feasible because sometimes there are only a few organised stakeholder groups that are in some way involved in the planning and implementation of water policies. Many local stakeholders are not sufficiently aware of regional water management issues and are therefore unable to become involved. This may be combined with the fact that experts often produce a highly technical body of information that becomes incomprehensible to non-

experts. Besides this, transboundary water commissions are largely expert/technical in nature. The socio-economic connotations of water management decisions may consequently be underestimated. One consequence of the expert/technical nature of commissions can be the lack of attention paid to the involvement of stakeholders.

The implementation of water protection measures requires considerable financial resources, usually much higher than the amount actually available in transboundary water basins. In this context, the environmental objectives of water management plans should be coordinated with the economic development priorities of the border regions.

The role of (static-dynamic) information in transboundary settings

Information plays an important role in decision-making, ranging from use of information as a source of power and use of information to postpone decisions to applying information as a basis for cooperation. This synthesis of European research provides an insight into the role of information in transboundary regimes. This relates to the question of whether data/information (including socio-economic information) is exchanged across borders and communicated to the public. Underlying questions are: Who collects and produces information? Who interprets information? Who uses information (if anyone)? How is information used in decision-making processes? What were the drivers for (un)successful examples (e.g. budget, flood/drought, etc.)? Besides this, the review searches for use of information on new developments and scenarios. The key questions are: What happens with projections and planning (exchange of information on plans ("we are planning a dam") and expectations ("we expect our agriculture to increase by XY%") between countries, (do they match)? Is there exchange on planning and what is expected to happen? How does it fit? What are drivers for "good/bad" examples?

Environmental data is rarely used in the decision-making process unless it shows a direct and clear connection between the impact of the physico-chemical and biological conditions to changes in the economic and social situation in a given transboundary water region. Information for decision-making, especially the analysis of the problem, needs to fall within the scope of decision-makers' expectations. For a transboundary water management situation, this implies that, to be effective, an existing problem should be described from the viewpoints of the countries involved. Furthermore, the information should also allow for different solutions in the different countries.

A very wide spectrum of information is required to support decision-making and to evaluate the effects of water resources management decisions. Information production lags behind these information needs in water management. Although there has been progress in integrating between disciplines, information on transboundary water



basins continues to primarily focus on hydrological and ecological components of water bodies, largely ignoring the importance of socio-economic data and processes. Factors that hinder the production of improved information include;

- (1) Strong boundaries between different disciplines that cannot easily be overcome;
- (2) The variety of information needs are underestimated and the knowledge and perception of goals of information dissemination prior to producing the information is insufficient;
- (3) Differences in institutional behaviour between representatives of different organisations involved in co-operation hinder collaboration between these institutions.

To improve transboundary cooperation it is necessary to initiate actions such as common monitoring programs, the construction of common databases, common tools for hydrological and ecological predictions, as well as efficient information dissemination and exchange systems. These should all be based on an integrated perspective of water information management in which information supports all the phases of the decision-making process.

Innovative approaches and technologies to disseminate water management information (e.g. semantic webs, citizen juries) are found to be valuable in transboundary water basins as a means of increasing awareness. Knowledge management and technological solutions should be used to provide interested parties with comprehensive information and news on environmental and regional development issues in the basin. In developing this usable knowledge, it is strongly advisable to reduce the complexity of the information by breaking down the problem domain into sub-domains. The discourse, including the

various arguments and facts, should be made as open and easy as possible with the goal of reaching actual decisions rather than accumulating opinions.

Insights and recommendations for policy makers

- It is essential to address differences in water management competencies between countries. Besides this, the political processes of transboundary cooperation must be taken into account.
- Current transboundary cooperation builds on the idea of mutual trust. There is, however, a need for transboundary cooperation models that build on a certain level of distrust, especially in basins where disputes exist.
- There is a need for better cooperation and coordination across borders. To achieve this, at least formal arrangements and detailed procedures for transboundary cooperation must be established between riparian countries.
- There are weak requirements for transboundary river basin districts in the WFD.
- Stakeholders and public participation are the keys to the successful implementation of water policies. Transboundary Water Commissions need to involve stakeholders.
- The use of environmental information combined with socio-economic information is crucial for transboundary water management and decision-making.
- There is a need to develop innovative approaches and technologies to disseminate water management information in a comprehensible manner to the wider public.

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