

# TRANSBOUNDARY RIVERS IN CROATIA: FLOWING TOWARDS COOPERATION

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The main aim of this paper is to depict a unique situation of Croatia and challenges set before it regarding integrated river basin management (IRBM). This will be addressed in the first part of the paper. Even though it was the case even before, after gaining its independence in the early 1990s many of Croatia's borders have been either set by river flows or crossed by them. Rivers make around 2/3 (1300 km) of length of Croatian continental borders (2028 km) with her neighbours. Also, around 75 % of Croatian population lives in internationally shared river basins. Besides the unusual length of borders due to the specific shape of its territory, this case is very interesting because of the array of complex geographic, historic, ethnic and political factors influencing cross border cooperation in general. It is emphasized even more when the subject of the cooperation is highly sensitive and increasingly appreciated commodity such as water. Nevertheless, fresh water as a commodity is far from being the only issue in the river basin management, so the authors will refer to other matters as well.

The above said will be clarified through the demonstration of the different levels and shapes of the shared river basin management in Croatia. The goal of this paper is to examine the most appropriate and efficient level of the governance on several major issues regarding transboundary rivers in Croatia. These are:

- Political issues, primarily concerning the borders which are still partially an open question after the break-up of ex-Yugoslavia;
- Water management which encompasses waste water management, fresh water distribution, irrigation and flood prevention
- Inland navigation
- Environmental protection and sustainable development and exploitation of the resources in general and raw materials in particular.

The principle of subsidiarity will be used to discuss the levels of decision making and more concretely passing the laws concerning directly or indirectly the matter of transboundary rivers. The authors will review compatibility of Croatian laws and regulations with those of the European Union, especially with the EU Water Directive. As it is an important part of the *acquis communautaire* which Croatia is trying to acquire to become a full member of European Union. However, the legal basis itself can only give a primary guidance to the governance and the management of the transboundary river basins. This is the reason why the authors of this paper choose also the concept of the international regimes to describe systems of the integrated river basin management (IRBM). This coincides with another important requirement set in front of Croatia by the EU. It is regional cooperation, which can be quite difficult but on the other hand particularly important in the post conflict zones with long history of the obstacles preventing bilateral and multilateral relations to evolve.

In the third part of this work the authors selected three case studies for which are expected to provide clear picture of the management of the transboundary surface waters in Croatia, as well as taking into consideration possible variations regarding their general characteristics which could influence the degree of the tools used in the governance and management of these river basins. The three river basins in question are Dunav (Danube), Sava and Neretva.

- The Danube river basin is an exemplary case study for the comprehensive river basin management and the full fledged regime. The main body dealing with the Danube river basin is the International commission for protection of the Danube river (ICPDR) with the legal foundation displayed in the Danube River Protection Convention signed in 1994 in Sofia, Bulgaria by twelve contracting parties composed of eleven riparian countries and the European Union. Bosnia and Herzegovina and Serbia joined later. Croatia is one of the original signatory parties of the Danube Convention and after the ratification in the Parliament in 1996 it entered into force in October 1998. Besides the Danube River Protection Convention there is another international agreement on Danube with Croatia as a contracting party. It is the Convention on the Regime of the Navigation on the Danube, signed in 1946 by former Yugoslavia among others and ratified by Croatia as one of the successor countries. Special importance has the ICPDR Danube Regional project supported by the United Nations Development Programme (UNDP) and Global Environment Facility (GEF). Its first goal is the ecological conditions of land use and water resources management.
- **Sava** river basin will serve us to portray a major river connecting ex-Yugoslav republics, Slovenia, Croatia, Bosnia and Herzegovina and Serbia. It is useful for this paper because its management adopts good practices from the Danubian example and it can be interesting to see if, how and to what extent it functions in reality. Sava is the longest river course in Croatia (562 km) and its basin covers around 40 % of Croatia state area. The legal basis for the cooperation on the river Sava basin comprise following agreements:
  - Multilateral Framework Agreement on the Sava River Basin - signed by the riparian countries in 2002. In addition to that Agreement the Protocol on Navigation Regime in the river Sava basin between the Republic of Slovenia, Republic of Croatia, Bosnia and Herzegovina and the Federal Republic of Yugoslavia
  - Bilateral Agreement of the cooperation on water management between Croatia and Bosnia and Herzegovina, signed in 1996 by the Prime Ministers
  - Bilateral Agreement of the cooperation on water management between the Republic of Croatia and the Republic of Slovenia signed in 1996 by the Prime Ministers.
- Third case study differs from the previous two not only in its size and scope but in the fact that it pertains to the Adriatic watershed, whereas the other two belong to the one of the Black Sea. **Neretva** is 225 km long. Its source is in the karst mountainous area of western Herzegovina and it descends forming a fertile delta in southern part of Croatia. The fragile environment of delta is the main consideration of Croatia. Although, Croatia shares this river basin with only one country, Bosnia and Herzegovina, its complex internal organisation makes any kind of cooperation much more complicated. The legal basis for the cooperation on the river Neretva can be found in Helsinki convention and the bilateral agreement on water management between the Republic of Croatia and Bosnia and Herzegovina.

In the fourth part the most important stakeholder groups and their perception of the cooperation across the state border regarding the management of the rivers of their area will be in focus. These stakeholders are regional and local authorities; public companies managing aquifers, potable water and waste water in the area; inland navigation and port administration; private sector and the general public. The responsibility for managing water and public water estate as well as protective and hydro-ameliorative water structures of the Republic of Croatia is delegated to Hrvatske vode (Croatian Water). It is a government agency founded by the Republic of Croatia. Hrvatske vode is a non-profit organisation which neither gains nor divides profit. It, however, channels potential revenue surplus into improvement of the water management. Municipal water management branch functions on the local and regional level, especially with the public water supply and sewage systems. The stakeholders in the form of the legal entities cover commercial water usages such as electricity production, fish-farming, irrigation, navigation and tourism. In addition, the water sector has always been initiator of the construction projects and accompanying activities and it has significant influence on development and employment. In Croatia there are 180 environmental NGOs. In the beginning they were mostly movements organised by the scientists and experts, whereas today, concerned citizens are becoming increasingly involved. Only about a half of the NGOs have contact with the NGOs from other, mostly, neighbouring countries, but it is based mostly on the personal contacts and only rarely on joint projects.

A questionnaire has been put together and distributed to the representatives of each identified stakeholder group in the area of each case study river. The results from the questionnaire exhibit the quite high level of the satisfaction with the involvement and the role of the international organisations

such as the European Union and the World Bank with their funds and grants, which eventually imply also the political power and influence. Another question was similar but in regard to the NGOs. The responses were correspondent with the general spirit of the inclusion of these actors in the Croatian politics. They are still on the edge of the decision making processes. The crucial question was the one on the subsidiarity, i.e. the most appropriate level for the decision making concerning the transboundary rivers. Two of the responses find the international level the most appropriate one, but with the comment that it applies only on the basin-level issues.

The topic of management of transboundary rivers in Croatia has not been handled sufficiently in a multidisciplinary manner. There is a lack of social scientists and geographers specialized in the environmental and related issues in Croatia. Experts dealing with the water management and governance problems are mostly civil engineers and somewhat biologists. Lawyers are dealing with the very narrow scope of the defining bilateral and multilateral agreements. That is why at least one interdisciplinary team should be established in Croatia to manage transboundary rivers' questions to further enable it for the execution of integrated river basin management concept. Our intention is to set an example and possibly a positive impulse towards the expansion of the works on the topics regarding management of the transboundary aquifers. In order to accomplish a comprehensive overview in case of the rivers considered here as the case studies, it is suggested to generate cooperation with the researches in this field from other counties in the region.

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