

Instruments for an equitable management of shared waters

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Abstract. Concepts of Integrated Water Resources and River Basins Management are considered as key points to the question of how conflict can be avoided and international waters be managed. Over the last fifty years, countries have been engaged in more than 500 conflictive events over water. Almost 90% were disagreements over infrastructure and water quantity allocation. The Convention on the Non-navigational Uses of International Watercourses (1997) provides an important template for cooperation and equitable transboundary water-sharing.

Key Words: water, management, resources, conflict.

Resumen. Conceptos sobre la Gestion Integrada de los Recursos Hídricos y de las Cuencas Hidrográficas son considerados como puntos clave de la cuestión de cómo los conflictos pueden ser evitados y las aguas internacionales deben gestionarse. Los países del mundo, en los últimos cincuenta años, han participado en más de 500 conflictos sobre el agua. Casi el 90% eran desacuerdos sobre la infraestructura y la asignación de la cantidad de agua. La Convención referente al uso de los ríos internacionales para fines distintos de la navegación (1997) constituye un importante modelo para la cooperación y uso equitativo de agua transfronterizos.

Key Words: agua, gestion, recursos, conflicto.

Rezumat. Conceptul de Management Integrat al Resurselor de Apă și a Bazinelor Hidrografice sunt considerate ca fiind puncte cheie la întrebarea cum pot fi evitate conflictele și gestionate apele internaționale. De-a lungul ultimilor cincizeci de ani, diverse state au fost implicate în peste 500 de conflicte legate de apă. În aproape 90% dintre cazuri era vorba de neînțelegeri privind infrastructura și modul de alocare a cantităților de apă. Convenția ONU privind utilizarea cursurilor de apă în alte scopuri decât navigația (1997) oferă un exemplu privind modul de cooperare și partajare echitabilă a resurselor comune de apă.

Cuvinte cheie: apă, management, resurse, conflict.

Introduction. Due to overuse and pollution, water-based ecosystems are considered the world's most degraded natural resources. In northern China, 25% of the Yellow River's flow is needed to maintain the ecosystem around it, but human overuse only leaves 10% (UNDP 2006). The availability of water was emphasized as a requirement for sustainable development at the Conference of Rio de Janeiro in 1992. By 2020 between 75 and 250 million people in Africa are projected to be exposed to increased water stress due to climate change (see also Petrescu-Mag 2009). This comes on top of already severe local water shortages throughout the world and ever-intensifying competition for water due to population growth and rising industrial and agricultural demand (IPPC 2007). Over the last fifty years countries have been engaged in more than 500 conflictive events over water. Almost 90% were disagreements over infrastructure and quantity allocation. The main trigger for conflict is usually not water scarcity per se, but unilateral construction of a dam or diversion of a river (Wolf 2006).

Transboundary Water Management. A Challenge. The Convention on the Non-navigational Uses of International Watercourses provides an important template for cooperation and equitable transboundary water-sharing (1997). It applies to uses of

international watercourses and of their waters for purposes other than navigation and to measures of protection, preservation and management related to the uses of those watercourses and their waters. One of the most important definition is that of the „watercourse“, which is broadly defined as: a system of surface waters and groundwaters constituting by virtue of their physical relationship a unitary whole. The definition not only accords with hydrologic reality, but also calls the attention of states to the interrelationships among all parts of the system of surface and underground waters that makes an international watercourse. Thus, it should be clear immediately that an effect on one part of the system will generally be transmitted to other parts. Two states (Pakistan and Rwanda) cited the inclusion of groundwater in the Convention as a reason for abstaining from the vote on it (McCaffrey & Sinjela 1998). Art. 5 of convention establishes the principle of equitable and reasonable utilization of international watercourse. Furthermore, next articles argue the utilization of an international watercourse in an equitable and reasonable manner within the meaning of article 5 requires taking into account all relevant factors and circumstances, such as: geographic, hydrographic, hydrological, climatic, ecological and other factors of a natural character; the social and economic needs of the watercourse States concerned; the population dependent on the watercourse in each watercourse State; conservation, protection, development and economy of use of the water resources of the watercourse and the costs of measures taken to that effect. The Convention obliged the signatory parts to prevent, reduce and control (individually and, where appropriate, jointly) the pollution of an international watercourse that may cause significant harm to other watercourse States or to their environment, including harm to human health or safety, to the use of the waters for any beneficial purpose or to the living resources of the watercourse. Watercourse States shall take steps to harmonize their policies in this connection. The fact that many states have not signed the convention represents an obstacle in preventing, solving problems.

Water not only knows different regulatory regimes and legal classifications, but it also crosses borders. Sometimes water is seen as a source of conflict and othertimes as a source of cooperation. Two in every five people in the world today live in international water basins – catchments or watersheds – which account for 60 per cent of global river flows. In Africa, 90% of surface water and more than 75% of the population are located in transboundary river basins. Around the world, water sources for 800 million people living in thirty-nine countries originate beyond their national borders (UNDP 2006; UNESCO 2006). Therefore, the question arises: should water be managed and management structures defined according to existing administrative boundaries or according to natural boundaries, usually taken to be river basins? From a pure water resource point of view there might be much logic in adopting a river basin approach, or at least considering the river basin as the logical planning unit. However, in accordance with the principle of demand-driven development, a river basin organization should only be established in response to a perceived and expressed demand, typically expressed by multiple users (GWP 2000). A river basin organizations may range from being executive bodies with mandates for the allocation of water rights and fee collection to purely advisory bodies advising existing administrative and executive bodies. River basin organizations may also provide a useful mechanism for management of international water resources. There are numerous examples of such bodies, with varying objectives and functions from around the world, which suggests that they may contribute to the peaceful, equitable and negotiated management of shared waters. The mere existence of such bodies, providing a forum for the articulation of views and negotiation, encourages states to discuss and solve their mutual problems before disagreements escalate to a crisis level (GWP 2000). Water resources management (WRM) means all actions required to manage and control freshwater to meet human and environmental needs. These actions include not only an array of governance and management measures but also investment in physical infrastructure for storing, extracting, conveying, controlling and treating water. WRM also includes efforts to protect groundwater, control salinity and promote water conservation (Lewis & Lenton 2008). Therefore, concepts of Integrated Water Resources and River Basins Management are considered as keypoints to the

question of how conflict can be avoided and international waters be managed. Wolf (1997) argues that integrated, international water management is best implemented before conflicts arise within a watershed. Such an institutional framework for conflict resolution helps preclude data disputes and provides a pattern of cooperation in the absence of the intense political tensions of flashpoint. There are different definitions of Integrated Water Resource Management (IWRM). Some of them integrate different water using sectors, such as water supply and sanitation, industry, agriculture, energy, nature protection. IWRM is: "a process that promotes the coordinated development and management of water, land and related resources, in order to maximise the resultant economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems" (GWP 2000). Often IWRM incorporates the concept of River Basin Management (RBM), because to the idea that water resources should be managed within the hydrological confines of the catchment area or river basin (Dombrowsky 2007). According to Dombrowsky (2007), the IWRM and RBM encompass three main ideas: to manage water resources at the level of river basins as opposed to the level of political jurisdictions; to integrate different water uses and water sectors; this should be done through the set up of river basin organizations. IWRM is a process which can assist countries in their efforts to deal with water issues in a cost-effective and sustainable way. Guidelines referring to IWRM are numerous, some of them being formulated in the International Conference on Water and the Environment in Dublin (ICWE), 1992. The four Dublin principles are: 1. Fresh water is a finite and vulnerable resource, essential to sustain life, development and the environment; 2. Water development and management should be based on a participatory approach, involving users, planners and policymakers at all levels; 3. Women play a central part in the provision, management and safeguarding of water; 4. Water has an economic value in all its competing uses and should be recognized as an economic good.

Conclusions. While, sustainable development is a widely shared value, actions to achieve it generate conflict because they involve property rights, job, taxation and land use, and because decisions are often made without understanding interactions between and among complex natural and social systems (Grigg 1996). In many cases, an impediment to achieve an equitable and sustainable management for shared waters, is not the lack of adequate legislation but the lack of the political will, resources and means to enforce the existing legislation. At the European Union level, the Water Framework Directive (WFD) states that a special attention needs the transboundary river basins in which some specific problems have to be overcome: legal and political discrepancies, communication problems, social, cultural, historical differences and economic issues (Mihăiescu & Mihăiescu 2009). Public participation is very important for the river basin management activities as the EC WFD stipulates. Despite all efforts to find the best ways of solving the issues relating to sustainable management of water resources, it still remains a stringent problem humanity is facing to. As J. Kennedy said: "Anyone who solves the problem of water deserves not one Nobel Prize but two – one for science and the other for peace".

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