Sustainable management of water resources and international law

S. Marchisio
Professor of International Law, University of Rome “La Sapienza”
Director, Institute for Legal Studies on the International Community (CNR), C.so Vittorio Emanuele II, 251-00186 Rome, Italy

Abstract
The need is being increasingly felt within the international community for more careful consideration of the legal and institutional aspects involved in the use and management of water resources. Existing legal regimes, both national and international, may have no provisions for regulating or controlling new needs for sustainable management of waters. Innovative legal frameworks for water must thus be designed to both facilitate and achieve efficient allocation or reallocation of resources for environmental protection and proceed towards the attainment of social, economic and more general sustainable development goals. The no-harm rule, the equitable apportionment principle and the duty of consultation and negotiation among riparian or sharing States are now integrated by rules and standards pertaining to the new branch of international law on sustainable development: the duty of co-operation, the precautionary principle, the prevention rule, the polluter-pays principle, the environmental impact assessment requirement, which are gaining relevance also in the context of international water resources law, as shown by the 1997 New York Convention on the Law of the Non-Navigational Uses of International Watercourses. Sustainable water management also implies widespread adoption of good governance principles that ensure broader participation in development decisions and an open decision-making process. In developing and using water resources, priority has to be given to the satisfaction of the basic right to water. This paper intends to identify an effective legal international regime for management of water resources, compliant with sustainable development principles solemnly asserted within international law.

Keywords: Co-operation for protection of shared watercourses; duty of consultation and no-harm rule; equitable apportionment; international water resources law; sustainable development; water resources management

Existing legal regimes applicable to management of water resources come down from the days when water was considered an inexhaustible natural resource, while time has overtaken the legal frameworks which gave users a free hand on water, and progress in knowledge and technology has outdated many early types of control.

The search for new sources has led to the extensive use of groundwater, to transbasin transfers, to storage and distribution of formerly unforeseen size, to the recharging of aquifers, the recycling of water and the use of treated wastewater. We have seen also donations of water resources, as in the recent case of shifting of part of the Yarmouk River waters from Syria to the Kingdom of Jordan, largely echoed in the international press. Existing international regimes may have no provisions for regulating or controlling such new realities. To meet these needs, innovative water norms must be formulated, not only to facilitate and achieve efficient allocation or reallocation of resources for environmental protection, but also to proceed towards the attainment of social, economic and, more general, sustainable development goals.

Moreover, an essential prerequisite of a sound management of water resources is the existence of domestic legislation adequate to social reality, which, unfortunately, is lacking in most countries nowadays.

It is true indeed that planning and management of water resources must be based on water law principles which are implemented through conducive legal procedures. State
policies may have to undergo changes in order to face inter-jurisdictional conflicts for sector management of water.

Opinion of learned experts on water resources law, confirmed at least partially by State practice, seems to converge on agreeing that the second requirement for the utilisation of shared water resources is the conclusion of adequate agreements able to facilitate the most rational management of available water by means of appropriate co-operative actions and, particularly, the establishment of special organs and the definition of their functions and power on sector aspects.

In order to be sustainable development-oriented, these agreements should be as comprehensive as possible, sensitive to the interests of States or subjects involved: promotion of welfare of water users; attainment of domestic social and economic objectives; coordination of private activities among themselves and with public projects; protection of the interests of the public in common uses; recognition of environmental values.

It is easy to say, however, that such international regimes are difficult to build. They should come to terms with a few legal issues especially relevant to the domestic contexts: ownership or other legal status of water; the regime concerning the rights to use water, such as the permit/concessions systems; customary rights; limitations to right of use; beneficial uses like domestic and municipal, agricultural, industrial and hydropower production; legislation on water quality and pollution control; regime of underground water, of water works and structures. Let us think also of legislation on protected zones and areas; legislation on financial aspects; last but not least, the application of principles like polluter-pays or user-pays, that are gaining relevance at the international level as environmental policy guidelines.

So said, is there any internationally agreed upon definition of the concept of management of water resources? A point of reference is, of course, Article 24 of the New York Convention on the Law of the Non-Navigational Uses of International Watercourses, prepared by the UN International Law Commission and adopted by the General Assembly on 21 May 1997 in New York:

“Watercourse States shall, at the request of any of them, enter into consultations concerning the management of an international watercourse, which may include the establishment of a joint management mechanism. For the purposes of this article, “management” refers, in particular, to: (a) planning the sustainable development of an international watercourse and providing for the implementation of any plans adopted; and (b) otherwise promoting the rational and optimal utilisation, protection and control of the watercourse.”

Of that definition, I will retain three main elements: firstly, the principle of consultation on management, following which management of an international watercourse has to be the object of consultation amidst actors concerned, I mean watercourse States; secondly, this management may include, which is however not mandatory, the establishment of joint management mechanisms; thirdly, management means planning the sustainable development of an international watercourse and providing for implementation of any plan adopted, that is to say promoting, in an overall view, the rational and optimal utilisation, protection and control of the watercourses. I stress these three concepts: utilisation, protection and control.

Water resources in international law
If we move from a comprehensive concept of international management of water resources, traditional law of international waterways seems to be largely inadequate. As a matter of fact, we know that many uncertainties linger on international norms in this sector. Without excluding the other sources foreseen in article 38 of the Statute of the International Court of
Justice, it is true indeed that the bulk of international waterways law consists of treaty rules, whose main objects have been in the past, and still are, boundary delimitation, navigation and non-navigational uses. The importance of particular agreements between the subjects directly involved is witnessed by the framework character of the UN 1997 Convention, whose Article 3 expressly saves the validity of the international agreements in force, but also encourages harmonisation by means of executive agreements within the global context set by the Convention itself.

The above is also confirmed by the work of specialised institutions, like the Institute of International Law, the International Law Association and the International Association for Water Law (AIDA), who played an important role in identifying and analysing issues related to water management. The ILA Helsinki Rules have also been relevant in this field. Furthermore, in 1971 the UN International Law Commission commenced endeavours to assert the equitable and reasonable-oriented perspective for water management which culminated in the Convention adopted in 1997.

Contemporary international law governing the non-navigational uses of international waterways seems to rest on three basic precepts: (1) the no-harm rule, which provides that a State may not inflict important, significant, substantial or appreciable damage to or on the territory of another State, nor negligently allow persons on its territory or otherwise under its control to cause such harm; (2) equitable apportionment of the beneficial uses of a watercourse among watercourse States; and (3) the duty imposed on States planning new or expanded activities to inform the other watercourse States of their intentions and, possibly, to agree to enter into negotiations.

The no-harm rule and the principle of equitable utilisation are considered more or less as general international law, based mainly on national and, to some extent, international judicial practice and buttressed, more recently, by treaty provisions, soft-law and State practice. As said, the third rule imposes on any watercourse State planning a new or expanded use of the water resources the obligation to provide the other watercourse States with information if there is a risk of an “appreciable adverse effect”, and the complementary duty, in the event of disagreement, to seek a solution through bona fide negotiation. Both these obligations may be found in Articles 12 and 17 of the UN Convention. While the existence of a customary duty to negotiate in good faith is beyond dispute, the obligation to inform, which still in the eighties seemed to be in statu nascendi, is today confirmed by the principles on sustainable development internationally agreed at least in soft law texts.

Going back to the management concept as set by the above-mentioned Article 24 of the UN 1997 Convention, we must say that the administration of water resources at the international level (at the level encompassing the management of “shared” or “international” water resources) is not a novelty. It is international water law that long seeks co-ordination amongst national water policies and administrations affecting international drainage basins or those sections of rivers and lakes or underground waters which are shared between two or more countries. Many treaties are indeed applicable in the field of administration. The institutions responsible for the management of international water resources may take different names (agency, commission, committee or authority) but substantially they encompass any mechanism established by agreement among two or more States sharing a common basin (surface or underground) for the purpose of dealing with its management.

It is true that the number of more or less permanent river or basin mechanisms established in Europe, the Americas, Africa, Asia, is rather limited, if not comparatively exiguous. We all know that the largest number of such bodies have, however, been set in Europe, initially for regulating the use of water for navigation, but subsequently also for the common uses of waters, hydropower generations and, in the last decades, also for the control of water pollution on international rivers. The 1966 Helsinki Rules on the Use of the Waters of
International Rivers, adopted by the Fifty-Second Conference of the International Law Association, provided the outline of a sound, rational, equitable management of water resources.

The sustainable development principles: co-operation and shared water resources

Founding on these bases, a new perspective in international water resources law has been brought in by the development, during the seventies and eighties, of environmental international law. In 1986, it was certainly a new approach expressed by the World Commission on Environment and Development the principle that the conservation of natural resources and the environment must be treated, by all States, regardless of their stage of development, as an integral part of the planning and implementation of development activities.

Hence, in the long run, protection of the environment on the one hand, and economic and social development on the other, were presented as not incompatible but mutually reinforcing goals. This has been the main achievement of the nineties UN world conferences, in particular the 1992 UN Rio Conference on environment and development. The output of UNCED has underlined new trends in the evolution of international environmental law at the regional and global level.

The very notion of “international law in the field of sustainable development” is mentioned in Principle 27 of the Rio Declaration on Environment and Development, which committed States to co-operate in good faith and in a spirit of partnership in the fulfilment of the principles embodied in the Declaration and to co-operate in the further development of this emerging branch of international law.

The tendency inaugurated at Rio has been bearing fruit since. Many principles on sustainable development endorsed at UNCED are reflected in treaties, acts of international organisations, declarations of the UN General Assembly, State practice and international commitments of other kind, and, what is more important from our standpoint, have been integrated in international water law, both soft and hard.

Before all, Principle 2 of the Rio Declaration, that reflects customary international law, states the main legal rule applicable also to water resources utilisation: every State has the right of permanent sovereignty over natural resources, but at the same time the obligation not to cause transboundary interferences. This principle has been repeated in Article 7 of the 1997 UN Convention on International Waters, stating the obligation not to cause significant harm, firstly as an obligation of prevention and secondly as a duty of consultation with the potentially affected State or States in order to eliminate or mitigate such harm and, if appropriate, to discuss the eventual compensation.

The Rio Declaration also set the principle of co-operation, confirmed by Article 8 of the 1997 Convention, which imposes the obligation of solidarity in solving the shared water resources problems in transboundary contexts. The obligation of co-operation, as set in Rio and the 1997 Convention, includes these main components: equitable and reasonable use of transboundary water resources; prior notification and relevant information to neighbouring States regarding activities that may have a significant adverse environmental effect on shared water resources; the obligation to consult with those States at an early stage and in good faith and, finally, the obligation to immediately notify natural disasters and emergencies concerning water resources.

But there is more. Other general principles which have gained relevance in the field of international law on sustainable development are: the precautionary principle, following which the lack of scientific certainty is no reason to postpone action to avoid potentially serious or irreversible harm to water resources; the internalisation of natural resources costs, in accordance with the polluter-pays or user-pays principle – according to which, beyond basic needs, water polluters and users should be charged appropriately; the
environmental impact assessment requirements not only at the national level but also in transboundary context.

In a sustainable development-oriented perspective, water can no longer be considered only as a natural resource that every State is free to manage and utilise within its jurisdiction, pursuing its own environmental and developmental policies. The 1962 Declaration on Permanent Sovereignty over Natural Resources, contained in UNGA Resolution 1803(XVII), now has to be interpreted in line with the new international legal principles, even if de lege ferenda: in particular, sovereignty over natural resources as a principle of international law has evolved since the sixties. If the mentioned Declaration still serves as a basic instrument in this matter, Principle 2 of the Rio Declaration and Article 7 of the UN 1997 Convention demand that sovereignty over water resources and, accordingly, water resources management be preventful of extraterritorial effects that could provoke environmental damage in other countries or in areas outside national jurisdiction. Sovereignty must be exercised in a sustainable and environmentally responsible way.

This link is confirmed also by judicial decisions. I would like to mention the judgement of October 1997 by the International Court of Justice in the case of the project dam of Gabčíkovo-Nagymaros, the well known dispute between Slovakia and Hungary. In the Court’s decision, the principle of sustainable development has been applied, as a legal principle, in the context of the obligations of the riparian States of the Danube river, in order to allow that after the project completion the flow of water not be altered by harmful activities and works. In paragraph 140 of this decision the Court states in primis, referring to a well consolidated principle of general international law, that “existing norms” impose a duty of control and prevention actions. But it reaches further towards “new norms and needs” elaborated and affirmed by a large number of instruments adopted in the course of the past two decades. The Court has thus indicated to the parties that they were obliged to look afresh jointly at the effects on the environment of the operations of the Gabčíkovo power plant. In particular, they had to find a satisfactory solution for the volume of water to be released into the old bed of the Danube and into the side arms on both sides of the river. All this should be done, according to the Court, based on these new norms and new standards that tend to reconcile economic development with the protection of the environment. In other words, following the Court, this is the very concept of sustainable development, the criterion that could lead to a reconciliation among environmental and developmental objectives.

Some may say that the reference to the new norms and needs is rather generic. As Vice-President of the International Court of Justice Weeramantry argues in his separate opinion, the Court could have been more explicit about referral to the legal principle on sustainable development which, according to the attentive analysis that Justice Weeramantry carries out on State practice and related opinio juris, has to regarded as an integral, necessary part of modern international law.

Integrated water resources management
As we said, the international acts on sustainable development, as well as the 1997 Convention, make express reference to the notion of integrated water resources management. The point of departure on this has been Chapter 18 of UNCED Agenda 21, on “Protection of the Quality and Supply of Freshwater Resources: Application of Integrated Approaches to the Development, Management and Use of Water Resources”.

We found in this Chapter the recognition of freshwater resources not only as key global renewable components of all terrestrial ecosystems, but also as limited and vulnerable resources. For this, the integration of sectoral water plans and programmes within the framework of economic and social policies, appears to be of paramount importance for national and international action.
If the overall objective is to satisfy the freshwater needs of all countries for their sustainable development, Chapter 18 focuses on two main concepts: the first, following which water is not only a natural resource, but also a social and economic good, whose quantity and quality determine the nature of its utilization; the second, according to which integrated water resources management “should be carried out at the level of the catchment basin or sub-basin”.

The first assumption implies, as is known, a greater reliance on pricing, incentives and demand management, with special attention to means like different values in urban and agricultural uses, transaction costs of water reallocation, prices for urban and industrial use, fees for irrigation, cost recovery through user groups, indirect methods of setting irrigation charges and so on. The main aim of water legal regimes both at the international and national level is that water resources are distributed in the desired quality and at the lowest possible price taking into account the special needs of poor people.

As far as the second element is concerned, we must recall the failure of many regulatory regimes to address water resources administration in a comprehensive manner. Criticisms deal mainly with the so-called fragmented management, for which each type of water use is regulated by separate agencies or separately considered.

The same approach has been endorsed by the International Conference on Water and Sustainable Development, held in Paris on 19–21 March, 1998. The Final Declaration underlined that water is a key natural resource for future prosperity and stability, which should be recognised as a catalyst for regional co-operation. It is a global commitment to promote the integration of all aspects of the development, management and protection of water resources. Adequate legislation and regulations for the management of water resources and the means for their enforcement are mentioned in the Paris Programme for Priority Action as the object of projects for the establishment and enforcement of administrative, financial and technical frameworks.

Analogous indications have been also absorbed at the Mediterranean level. Suffice it to mention the first Mediterranean Conference on Water Resources, held in Algiers on 30 May, 1990, and the “Algiers Charter” adopted on that occasion. In its turn, the Second Mediterranean Conference on Water (Rome, 28–30 October, 1992) called upon Mediterranean countries for self-endowing with more modern regulations on water management in order to effectively front forthcoming challenges.

Finally, under the terms of the Declaration adopted in Marseille in November 1996 within the framework of the Euro-Mediterranean Conference on Local Management of Water, the 27 countries of the Euro-Mediterranean partnership gave birth to the Euro-Mediterranean System of Information on the Know-How in the Water Field (E.N.W.I.S.), with a view to deepening knowledge and improving medium- and long-term planning in the field of water resources. The Conference stressed, *inter alia*, the importance of creating “a well defined legal and institutional framework in order to secure a global and integrated approach to the issue of increasingly scarce water resources”.

The unitary concept of the hydrologic basin

Here comes the reference to the integrated approach, realisable at the national and international level via the unitary concept of hydrologic basin. In essence, this comprehensive approach breaks down the very complex problems existing in a water basin into more manageable elements to achieve coherent cross-sectoral water management.

From a comparative point of view, it is noteworthy that most water institutions already belong to the category of agencies with an inter-basin or basin level of jurisdiction. Indeed, following many commentators, the basin-oriented administration of water resources is to be considered as the best approach for guaranteeing environmental protection and the
sustainable development of water resources, for it allows us to co-ordinate the interests of all the water users, to establish quality standards as a function of needed utilisation, to organise industrial, rural and municipal activities in the basin’s territory consistent with the overall planned objectives. The river basin system realises indeed a form of water participatory governance which covers an entire region’s water resources. The same applies, as it is evident, to international river basin agencies, which have been developed in order to manage, in a sustainable way, water resources shared among different riparian States.

As we saw, the UN 1997 Convention contains a general provision on co-operation which is more stringent than that in Chapter 18 of Agenda 21. Another international document, the Petersberg Declaration, adopted by the 1st Petersberg Round Table on Global Water Politics, Co-operation for Transboundary Water Management (3–5 March, 1998) foresees, in its turn, the strengthening of legal instruments, as it says that:

“Given the recognised importance of international conventions, and other types of agreements to the long-term co-operative management of shared water resources, support should be provided to countries in economic transition and developing countries, to strengthen skills to more effectively participate in the development and implementation of these agreements. It is recommended that actions be taken to support supplementing the UN 1997 Convention by regional and, where necessary, bilateral agreements based on the Convention. It is also recommended to support, as appropriate, the transfer of these principles into national legislation wherever necessary”.

The right to a balanced and healthful environment and the right to water as human rights

Lastly, an important aspect is that sustainable water management cannot be achieved without widespread adoption of good governance principles that ensure broader participation in development decisions and an open and transparent decision-making process. This leads to the right to water as a fundamental human right to be fulfilled as a part of the right to an adequate environment.

This perspective is not to be underestimated. In fact, a sustainable development-oriented management of water resources could lead more easily to the human right to development, which, according to Principle 3 of the Rio Declaration, must be fulfilled so as to equitably meet developmental and environmental needs of present and future generations. The realisation of this basic right, as well as the right to a healthy environment, definitely depends on access to water and sanitation. In developing and using water resources, priority has to be given to the satisfaction of basic needs and to the safeguarding of ecosystems.

Conclusions

My conclusion is that in order to improve management of water resources, it is important to support integrated, multidisciplinary and multiyear projects for the establishment and improvement of legal frameworks both at the international and national level. These projects should take into account the specific needs, capacities and culture of each country and address in particular: (a) adequate regulation for an integrated management of water resources and means for their enforcement; (b) management agencies and institutions, that already exist or are to be set up, together with a precise definition of their responsibilities; (c) institutional bodies and procedures enabling the participation of local authorities, representative of users and civil society in decision making.

The sustainable development perspective will help us: sustainable development is not a new concept but, in my opinion, the wisdom of humankind.