

**WATER AS A VEHICLE FOR  
INTER-STATE COOPERATION:  
A LEGAL PERSPECTIVE**

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# **WATER AS A VEHICLE FOR INTER-STATE COOPERATION: A LEGAL PERSPECTIVE<sup>1</sup>**

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## **I. Introduction**

Contrary to popular belief cooperation and agreement, not open conflict, appear to be the norm in interstate water relations. This finding is buttressed by an impressive record, both historical and contemporary, of treaties and agreements between and among sovereign states over the development, management and protection of the water resources of rivers, lakes and, as of late, aquifers that straddle international borders.

Against this backdrop the potential of the core principles of international water law to play a role in reconciling conflicting interests of states sharing a watercourse will be discussed. The three core principles of international water law are the principle of equitable utilization, the obligation to not cause significant harm and the duty to cooperate. They are binding upon states in their general form as customary international law or in the concrete form they have received by being enshrined in watercourse agreements regarding specific watercourses.

In the first part of this paper the role of the core principles in three different scenarios will be discussed. The first is a setting where a shared watercourse, but no specific treaty exists; the second, where a treaty is in the process of being negotiated; and the third where an agreement over the shared resource is in force. The second part of the paper will look in detail at the normative content of each principle, its reflection in specific watercourse agreements and its implementation by joint bodies. Both parts will show that the contribution of the law is neither simply formal, adding a legal varnish to a negotiated deal, nor that it provides just “bindingness” at the end of an exclusively political process. On the contrary, the law imposes upon states material and procedural rights and duties that limit states’ unfettered sovereignty to do as they alone wish with the part of an international watercourse that falls within their territory. International water law is designed in a way as to lead to mutually acceptable solutions in situations of conflicting interests and even to bring about cooperation in a number of ways.

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## II. The Role of the Core Principles of International Water Law in Different Scenarios

As already mentioned the core principles of international water law are the principle of equitable and reasonable utilization, the obligation not to cause significant harm and the duty to cooperate with co-riparian states in various forms such as the duty to exchange information as well as data and the duty to inform about planned measures. These principles play different roles in different scenarios such as when no specific treaty for a shared watercourse exists, when states are in a process of negotiating one or when a treaty regulates a specific resource.

### 1. A Shared Watercourse for which no Specific Treaty Exists

In the first scenario, states share a watercourse but have not concluded any specific treaty regarding this resource. In some cases shared and non-conflicting use has been a matter of fact for a long time and no party sees a need for change or formalisation. In that case concluding a formalised agreement might even give rise to differences as it might disturb a carefully worked out *de facto* balance. In other cases there have been differences regarding the use of a common watercourse, but a treaty does not seem to be feasible for political reasons.

Both types of cases fall under the regime of customary international law<sup>2</sup> that is binding upon states. The core principles of international water law already mentioned are such principles of customary international law. A state that can claim to act in accordance with the law is from a legal point of view in a stronger negotiating position than a state that has to justify a deviation from the rule (*in dubio pro iure*). However, although states are bound by customary international law, its impact is often limited for two reasons. First, rules of customary international law are abstract and general. Although their abstractness and generality is an advantage in so far as it enables the principles to be applied in all cases, it is also a disadvantage as they are likely to be interpreted in very different ways by the various parties. Second, the implementation depends to a large extent on the political will of the parties concerned as means of international enforcement are weak. Therefore, a tendency to conclude more and more comprehensive agreements for specific watercourses is noticeable.

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<sup>2</sup> General practice (*consuetudo*) accepted as law (*opinio iuris*), Art. 38 para. 1 Statute of the International Court of Justice.

## 2. A Shared Watercourse for which a Treaty is Being Negotiated

The negotiation of a new watercourse agreement is the second scenario in which the principles of international water law come into play. A number of motives can encourage states to seek to conclude a treaty. Among them is the desire to settle a potential conflict before it evolves into a real conflict the political and economic costs of which are in the vast majority of instances greater than the costs of a negotiated solution. Other reasons can be the need to regulate a change in the current situation, e.g., the construction of new works, or the wish to bring clarity to the rights and obligations of each riparian, or to advance cooperation by institutionalising it with the creation of a joint body or authority.

The general principles of law can influence the negotiation process in several ways. It can be the aim of the negotiations to concretise one or more of the general principles and to apply them to a specific situation.<sup>3</sup> The interpretation of the principles by international authorities such as the International Law Commission (ILC) or the International Court of Justice can give guidance to states searching for solutions. Calling upon international law, *ab initio*, strengthens the position of the state that can claim to be on the side of the law. By now an acceptance of the rule of international law exists. States that want to breach this law or diverge from it will be questioned at the negotiating table to justify their position. Furthermore, in general, respect for these principles is a prerequisite for a working treaty, *i.e.*, a treaty that is respected and applied by all parties.

## 3. A Shared Watercourse for which a Treaty Exists

The third scenario is one in which a specific watercourse agreement is in place either regulating a certain shared resource in general or only dealing with a specific undertaking (as in the Gabčíkovo-Nagymaros case<sup>4</sup>).<sup>5</sup> While comprehensive international agreements such as the Convention on the Law of the Non-Navigational Uses of International Watercourses (UN WCC) of 1997 serve to set a general basic standard and a minimum common denominator, regional instruments such as UN/ECE Convention on the Protection and Use of Transboundary Watercourses and International Lakes<sup>6</sup> or the Revised Protocol on Shared Watercourse Systems in the Southern African Development Community (SADC)<sup>7</sup> can already attain higher degrees of detail as with fewer parties fewer conflicting interests need to be reconciled. Watercourse treaties for particular watercourses can determine in detail provisions for rights and

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<sup>3</sup> *Infra* part III.

<sup>4</sup> Gabčíkovo-Nagymaros Project (Hungary v. Slovakia), 1997 I.C.J. 7 (September 25).

<sup>5</sup> A valuable tool to find specific watercourse agreements is the International Freshwater Treaties Database at Oregon State University, <http://www.transboundarywaters.orst.edu/projects/internationalDB.html> (last accessed 15 February 2003). A number of treaties are also included in FAO's FAOLEX database, <http://faolex.fao.org/faolex/index.htm> (last accessed 15 February 2003).

<sup>6</sup> 18 March 1992, reprinted in: FAO, Sources of International Water Law, Legislative Study 65, p. 65.

<sup>7</sup> Revised Protocol on Shared Watercourse Systems in the Southern African Development Community (SADC), 7 August 2000, <http://faolex.fao.org/faolex/index.htm> (last accessed 18 February 2003).

obligations, stipulate mechanisms to negotiate and to share information, provide for dispute resolution mechanisms and establish joint bodies and commission<sup>8</sup>. Thereby, they constitute in themselves a first step of cooperation and can create mutual dependency. The importance of specific agreements is evidenced by the fact that those cases where no comprehensive specific watercourse agreements involving all parties have been concluded are often the most disputed ones.<sup>9</sup> The PCIJ in the *Lake Lanoux* case already stated in 1957:

States today are well aware of the importance of the conflicting interest involved in the industrial use of international rivers and of the necessity of reconciling some of these interests with others through mutual concessions. *The only way to achieve these adjustments of interest is the conclusion of agreements on a more and more comprehensive basis.* International practice reflects the conviction that States should seek to conclude such agreements.<sup>10</sup> (emphasis added)

A host of motives can alternatively or cumulatively determine the conclusions of a treaty among them economic interest, the continuation of friendly relations in other fields, the will to prevent open conflict (as in the majority of cases open conflict is the economically and politically more costly option), third-party pressure, advantages in gaining or minimising of potential disadvantages versus a stronger co-riparian, or a sense of true adherence to the law. Whatever the motives, if a satisfactory solution for all parties is found in a treaty, it serves the purpose of managing conflicting interests. A specific treaty is far more likely to be respected than the general principles of international law alone. Treaties can be useful tools even when they fall short of including all riparians of a watercourse such as China and Myanmar in the case of the Mekong River Basin Agreement<sup>11</sup>, where meaningful cooperation developed or where states do not always fully comply with all of their treaty obligations but still more or less operate within the treaty framework.<sup>12</sup>

The possibility of specific treaties to create joint commissions and bodies deserves to be highlighted as an especially important advantage of treaty law. Despite the conclusion of an agreement, conflict potential and conflicting

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<sup>8</sup> Although the establishment of dispute resolution mechanisms in a specific treaty is one of the great advantages of treaty law, dispute resolution will not be dealt with in this paper as the focus is on the potential of the law in accommodating conflicting interests and thereby preventing disputes.

<sup>9</sup> Tanzi, Attila, *The UN Convention on International Watercourses as a Framework for the Avoidance and Settlement of Waterlaw Disputes*, in: 11 *Leiden Journal of International Law* 441, 443 (1998), citing Postel, S. "Changing the Course of Transboundary Water Management", 21 *Natural Resources Forum* 85 (1997) and stating that none of today's most critical international water disputes is governed by a watercourse treaty in force for all the parties concerned.

<sup>10</sup> *Lake Lanoux Arbitration (France v. Spain)*, Award of 16<sup>th</sup> November 1957, 53 *American Journal of International Law* 156 (1959).

<sup>11</sup> *Agreement on the Cooperation for the Sustainable Development of the Mekong River Basin*, 5 April 1995, Cambodia, Laos, Thailand, Vietnam, 34 *International Legal Materials (ILM)* 864 (1995), also at <http://www.internationalwaterlaw.org/RegionalDocs/Mekong.htm> (last accessed on 10 December 2002).

<sup>12</sup> For example, when an equitable and reasonable system of sharing a common resources was found, but one party falls short of exchanging data for a certain time.

interests will - evidently - not vanish overnight as though a magic wand had been waved. Therefore, more often than not, watercourse agreements include the creation of a permanent inter-state institution with a mandate to manage cooperation and to broker the reconciliation of the interests at stake on a continuing basis. These mechanisms have avoided or even resolved disputes<sup>13</sup>. The more formalised the cooperation between states, the greater the assurance that all partners are abiding by the rules<sup>14</sup>. Joint authorities also ensure an ongoing process of exchange on a technical level (versus a high-level political/diplomatic one) that helps to keep conflict potential low.

The more a treaty complies with and implements the general principles of international water law, the higher are, in general, its chances of being respected and implemented. For example, a treaty that is perceived to be inequitable by one party is not likely to be applied and hence meaningless. Therefore, treaties work best if they apply the general principles to the specific situation. Moreover, the general principles can be used to interpret treaty clauses. When differences occurred between the United States and Canada over Canada's right to divert Columbia River waters into the Fraser basin, the United States repudiated Canada's interpretation of Art. II of the 1909 Boundary Treaty<sup>15</sup> that appears to come very close to rights of unfettered sovereignty, on the grounds that "the reservation of sovereign rights in article II is based on the Harmon Doctrine, which is not part of international law".<sup>16</sup>

The fact that there is a tendency to develop legal regimes for a growing number of watercourses and a trend towards more comprehensive agreements bears evidence of the importance of treaty law. This is not to say that cooperation cannot exist without written agreement nor that there will not be conflict or that it will vanish the moment two or more states sign a water treaty. Treaties can, however, take the sting out of conflict situations and make states less prone to exacerbate conflict.

However, the conclusion of a treaty is only step one in a two-step process. Step two is the implementation of the treaty. If States fall short of this second step in part or altogether – as may happen – then the treaty will only be meaningless or meaningful to the extent that it is actually implemented.

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<sup>13</sup> See McCaffrey, Stephen, *The Law of International Watercourses*, New York, 2001, p. 341 note 109, who mentions two examples from the work of the International Joint Commission between Canada and the United States established by the 1909 Boundary Treaty (Treaty relating to Boundary Waters and Questions arising along the Boundary between Canada and the United States, 11 January 1909, United Kingdom and United States, <http://faolex.fao.org/faolex/index.htm>, last accessed 12 February 2003): the High Ross Dam case and the Garrison Diversion case.

<sup>14</sup> *Id.* p. 400.

<sup>15</sup> *Supra* note 13.

<sup>16</sup> Quotation from McCaffrey, *supra* note 13, p. 295.

### III. The General Principles of International Water Law in Detail

One, two or all three principles have inspired and are embedded in most contemporary bi-lateral or multilateral treaties and agreements concluded with regard to the development utilization, protection and management of shared resources. As they are distinctively general and abstract they are flexible enough to accommodate the multitude of geographical, economic, technological, social and political factors of each case in specific agreements. In the following part each of the three principles shall be illustrated, and it will be looked at how each has been applied and concretised in specific agreements and the mandate of joint bodies and commissions.

The general principles of equitable utilization, no significant harm and the duty to cooperate have been embodied in a number of international instruments. For example, in 1966 the International Law Association (ILA) developed the pioneering Helsinki Rules on the Uses of the Waters of International Rivers.<sup>17</sup> The most recent, comprehensive and authoritative framework deriving weight from twenty years of drafting and research done by the International Law Commission<sup>18</sup> is the UN WCC<sup>19</sup> that still has to enter into force.<sup>20</sup> It applies to all surface waters and groundwaters except confined groundwater aquifers.<sup>21</sup> In the United Nations General Assembly, an overwhelming majority of 103 states voted in favour of the Convention. More and more treaties such as the Revised Protocol on Shared Watercourse Systems in the Southern African Development Community Region<sup>22</sup> were influenced by the provisions of the UN WCC and some, for example the Incomati and Maputo Treaty<sup>23</sup>, refer explicitly to the principles and norms of international water law as reflected in the UN WCC. Other treaties were significantly influenced by the ILC's draft articles on which the UN WCC is based such as the 1995 Mekong River Basin Agreement<sup>24</sup>.

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<sup>17</sup> Reprinted in FAO, Sources of International Water Law, Legislative Study No. 65, Rome 1998, p. 290.

<sup>18</sup> The ILC included the topic in its general program of work in 1971. In 1974 it established a sub-committee and appointed the first of five Special Rapporteurs. The draft articles elaborated between 1974 and 1994 were the basis of negotiations in the Sixth (Legal) Committee of the United Nations General Assembly, convening for this purpose as the "Working Group of the Whole". For details on the ILC draft articles, see the 1994 commented proposal of the draft articles to the UN General Assembly, Report of the ILC to the General Assembly on its forty-sixth session, reprinted in: (1994) Y.B.Int'l L. Comm'n, vol. 2, pt. 2, pp. 66 – 135, U.N.Doc. A/CN.4/SER.A/1963/Add.1 (Part 2). See also, McCaffrey, The ILC adopts draft articles on international watercourses, in: 89 American Journal of International Law 395 (1995)

<sup>19</sup> The UN WCC is annexed to U.N. G.A. Res. 229, U.N. GAOR, 51<sup>st</sup> session, U.N. Doc. A/Res/51/229, 21 May 1997. It was adopted by a vote of 103 for and 3 against (Burundi, China, Turkey) with 27 abstentions. It is reprinted in 36 ILM 700 (1997).

<sup>20</sup> The literature on the UN Watercourse convention is vast. See generally, among others, McCaffrey, *supra* note 13; McCaffrey, Stephen and Mpazi Sinjela, The 1997 United Nations Convention on International Watercourses, 92 The American Journal of International Law 97 (1998); McCaffrey, Stephen, The Contribution of the UN Convention on the Law of the Non-Navigational Uses of International Watercourses, 1 International Journal of Global Environmental Issues 250 (2001); Tanzi, Attila, *supra* note 9.

<sup>21</sup> The law regarding "confined" groundwater aquifers is less clear. The ILC adopted a Resolution on Confined Transboundary Groundwater in which it commends states to be guided by the principles of the UN WCC where appropriate, Report of the ILC to the General Assembly on its forty-sixth session, reprinted in: (1994) Y.B.Int'l L. Comm'n, vol. 2, pt. 2, p. 135. At its 54<sup>th</sup> session the ILC decided to include on its programme of work the topic "Shared Natural Resources" and appointed Chusei Yamada as Special



## 1. The Principle of Equitable Utilisation

The first principle to be discussed is the principle of equitable utilization which is at the heart of international water law. Whereas in earlier times it was disputed whether unfettered absolute sovereignty (which crystallised in the so-called Harmon doctrine) or riparian rights or prior appropriation were the rule of law<sup>25</sup>, the principle of equitable utilization has been confirmed by the International Court of Justice as reflecting existing law in the Gabčíkovo-Nagymaros case where the ICJ stated that

“[w]atercourse States shall participate in the use, development and protection of an international watercourse in an *equitable* and *reasonable* manner.”<sup>26</sup> (emphasis added)

The principle of equitable utilization is ultimately based on the principle of sovereign equality of states. If states had the right to use their resources in an unrestricted and unilateral manner the use of one state of its resources could seriously hamper another state's use. Hence the use by that state would *de facto* take precedence over the use of the other states, whereas states' rights of use are on a par. Therefore international law demands that a *modus* of sharing is found that allows all parties having shared resources to make use of the resource as limited by other states' legitimate rights. In the UN WCC this obligation reads as “Watercourse States shall ... utilize an international watercourse in an *equitable* and *reasonable* manner ... with a view to attaining optimal and sustainable utilization thereof and benefits therefrom, taking into account the interests of watercourse States concerned, consistent with adequate protection” (Art. 5 UN WCC, emphasis added).

The entitlement to an equitable share is based on the notion of equality of *right* – not of *share* –. Optimal use is not equivalent to maximum use. Rather it implies to attain maximum possible benefits for all watercourse states and to achieve the greatest possible satisfaction of all their needs, while minimising the detriment to,

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Rapporteur, Report of the ILC to the General Assembly on its fifty-fourth session, <http://www.un.org/law/ilc/reports/2002/2002report.htm> (last accessed 15 February 2003).

<sup>22</sup> *Supra* note 7.

<sup>23</sup> Tripartite Interim Agreement between the Republic of Mozambique and the Republic of South Africa and the Kingdom of Swaziland for Co-operation on the Protection and Sustainable Utilisation of the Water Resources of the Incomati and Maputo Watercourses, 29 August 2002, South Africa, Mozambique, Swaziland,

<http://www.dwaf.gov.za/Docs/Other/IncoMaputo/INCOMAPUTO%20FINAL%20RESOLUTION%2029%20AUGUST%202002.doc> (last accessed 15 February 2003).

<sup>24</sup> *Supra* note 11.

<sup>25</sup> See generally, amongst others, McCaffrey, *supra* note 13, pp. 76 – 174; Paisley, Richard, Adversaries into Partners: International Water Law and the Equitable Sharing of Downstream Benefits, 3 *Melbourne Journal of International Law* 280, 282 note 6 (2002); Tanzi, Attila, *supra* note 9, p. 453 note 45, all with further references.

<sup>26</sup> *Supra* note 4, para. 147, p. 201.

or unmet needs of, each.<sup>27</sup> The equitable sharing of an international watercourse is a complex, ongoing process that can require constant adaptation to changing circumstances and uses.<sup>28</sup>

Art. 6 of the UN WCC gives guidance as to which factors a state has to consider when determining whether an actual or potential use is equitable, by assembling an indicative, non-weighted and non-comprehensive list. Comprised are natural or physical factors (lit. a)), social and economic needs (lit. b)), the population dependent on the watercourse (lit. c)), the effects of the use (lit. d)), existing and potential uses (lit. e)), conservation, protection, development and economy of use of the water resources and the costs of measures taken to that effect (lit. f)) as well as the availability of alternatives to a particular or planned use (lit. g)).<sup>29</sup> In order to ensure that its use is equitable and reasonable a state has to take these and other factors relevant in the specific case into account, not only with regard to its own territory, but also with regard to the whole of the shared watercourse.

In practice, equitable utilization can take different forms such as the equitable apportionment or allocation of water resources or the equitable sharing of downstream benefits.

Examples of allocation treaties are the 1906 Rio Grande treaty between the United States and Mexico<sup>30</sup> and the 1960 Indus Water Treaty<sup>31</sup>. In the dispute over the use of the Rio Grande the United States originally claimed to have absolute sovereignty over the Rio Grande waters, entitling the United States to use them as it saw fit without regard to the effects on Mexico,<sup>32</sup> whilst Mexico, on the other hand, based its argument on priority of use which would have prevented further development of the river by the United States. Ultimately, the States agreed upon a treaty to provide for the equitable distribution of the waters of the Rio Grande for irrigation purposes.<sup>33</sup> Agreed were the construction of a storage dam in the United States and the annual delivery of a fixed volume of water by the United States to downstream Mexico for irrigation use. Another example is the 1960 Indus Waters Treaty that reflects a complex and detailed equitable apportionment scheme of the regulated flow of the Indus river that in essence allocated the waters of the “Eastern rivers” of the Indus basin (the Sutlej, the Beas, and the Ravi) to India and those of the “Western Rivers” (the Indus, the Jhelum, and the Chenab) to Pakistan.

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<sup>27</sup> ILC Report, (1994) Y.B.Int'l L. Comm'n, vol. 2, pt. 2, p. 97, para. 3, U.N. Doc. A/CN.4/SER.A/1963/Add.1 (Part 2).

<sup>28</sup> A use that was equitable and reasonable can become inequitable and unreasonable through hydrological changes and a new use by one state can change the equitable utilisation calculus as among all other states.

<sup>29</sup> A similar list can be found in Art. V para. 2 of the ILC's Helsinki Rules, *supra* note 17.

<sup>30</sup> Treaty between the United States of America and Mexico relating to the waters of the Rio Grande, 21 May 1906, United States – Mexico, [http://www.internationalwaterlaw.org/RegionalDocs/Rio\\_Grande.htm](http://www.internationalwaterlaw.org/RegionalDocs/Rio_Grande.htm) (last accessed 19 February 2003).

<sup>31</sup> Indus Water Treaty, 19 September 1960, India, Pakistan and International Bank for Reconstruction and Development, 419 UNTS 125.

<sup>32</sup> McCaffrey, Stephen, *supra* note 1313, p. 285.

<sup>33</sup> *Supra* note 30.

Equitable utilization can also be achieved by sharing downstream benefits as in the 1961 Columbia River Treaty between Canada and the United States<sup>34</sup>. While in that case the United States had originally taken the position of prior appropriation and Canada one of unfettered sovereignty, in the treaty Canada committed itself to the construction and operation of three large storage dams that would benefit the United States by increasing downstream power generation and protection against flood. In return the United States agreed to provide Canada with one-half the additional power resulting from the Canadian projects and to pay Canada a lump sum for the flood-control benefits.

Similarly, the Treaty concerning the Integrated Development of the Mahakali River of 12 February 1969<sup>35</sup> provides for the sharing of water and benefits gained from works – mainly from the Pancheshwar hydroelectric project.

In all these cases states gave up extreme positions and settled in the end for solutions that benefited both parties in the respective agreement equitably and that reflected – explicitly or implicitly – the principle of equitable utilization.

The principle of equitable utilization also plays a role in various forms in the work of joint bodies. This can extend from merely administering apportionment terms without any latitude to change allocations, which is valid for the Permanent Indus Commission,<sup>36</sup> to playing a role in providing or fine-tuning the criteria which are to govern equitable utilization determinations. For example, the Mekong River Commission is mandated to prepare “Rules for Water Utilization and Inter-basin Diversion ...”<sup>37</sup> In some cases, it even goes so far as to prepare actual schemes for the equitable sharing of common water resources. This is the mandate of the Permanent Technical Committee of Water Experts established under an Agreement between Nigeria and Niger Concerning the Equitable Sharing in the Development, Conservation and Use of their Common Water Resources<sup>38</sup>, which is a framework water resources sharing agreement. In preparing such schemes, the Committee is to be guided by the criteria laid down in the agreement, which closely mirror those found in the United Nations Convention and in the Helsinki Rules.

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<sup>34</sup> Treaty Relating to Cooperative Development of the Water Resources of the Columbia River Basin, 17 January 1961, United States – Canada, and exchange of notes at Washington, 22 January 1964 and at Ottawa, 16 September 1964, 542 UNTS 244.

<sup>35</sup> Treaty between His Majesty’s Government of Nepal and the Government of India Concerning the Integrated Development of the Mahakali River Including Sarada Barrage, Tanakpur Barrage and Pancheshwar Project, 12 February 1969, India – Nepal, 36 ILM 531 (1997).

<sup>36</sup> Indus Water Treaty, *supra* note 31.

<sup>37</sup> *Supra* note 11, Art. 5.

<sup>38</sup> Agreement between Nigeria and Niger Concerning the Equitable Sharing in the Development, Conservation and Use of their Common Water Resources, 18 July 1990, [www.faolex.fao.org](http://www.faolex.fao.org) (last accessed 6 December 2002).

## 2. The Obligation not to Cause Significant Harm

The second fundamental principle generally recognised as governing international watercourse law is the obligation to not cause significant harm (*sic utero tuo ut alienum non laedas* – so use your own as not to harm that of another).

Art. 7 UNWCC contains the specific obligation “to take all appropriate measures to prevent the causing of significant harm...”<sup>39</sup> The phrasing “to take all appropriate measures” shows that the obligation is one of conduct, not one of result. “Significant” means that the harm caused must be more than minor or trivial, but that it can be less than substantial or serious.<sup>40</sup> Harm occurs in different forms and types. Proscribed is not so much factual harm, but injury of a legally protected interest.<sup>41</sup>

The obligation not to cause significant harm does not stand on its own, but must be reconciled and brought into line with the principle of equitable utilization.<sup>42</sup> The relationship between the two principles has been one of the most debated questions of international water law. Whereas some schools of thought argued that the equitable utilization principle took precedence over the no-harm rule, others saw the no-harm rule overriding the right to equitable utilization.<sup>43</sup> A complete prohibition of causing any harm would result in almost a veto power for new uses since any new use of a river, lake or groundwater resource is likely to cause some negative effect somewhere in the system. Were this to be prohibited

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<sup>39</sup> Examples of the no-harm principle in other international instruments are Art. 3 of the Charter of Economic Rights and Duties of States that reads: “in the exploitation of natural resources shared by two or more countries, each State must cooperate ... in order to achieve optimum use of such resources without causing damage to the legitimate interests of others”, GA Res. 3281(XXIX), U.N. GAOR, 29th Sess., Supp. No. 31 (1974), 14 ILM 251 and Principle 21 of the Stockholm Declaration (Declaration of the United Nations Conference on the Human Environment, 16 June 1972, UN Doc. A/Conf.48/14/rev.1) as well as Principle 2 of the Rio Declaration on Environment and Development, UN Doc. A/CONF.151/5/Rev. 1, 31 ILM 874 (1992). The latter, being almost identical to the former, reads:

States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental and development policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.

<sup>40</sup> McCaffrey, *supra* note 13, p. 329 *et seq.*

<sup>41</sup> *Id.* p. 347, 365.

<sup>42</sup> The problem of reconciling equitable utilization and the causing of harm occurs with respect to the shared use of all natural resources and different attempts have been made to find satisfactory solutions. See, for example, UNEP’s Principles of Conduct in the Field of the Environment for the Guidance of States in the Conservation and Harmonious Utilization of Natural Resources Shared by Two or More States, 17 ILM 1097 (1978). Principle 1 reads:

It is necessary for States to co-operate in the field of the environment concerning the conservation and harmonious utilization of natural resources shared by two or more States. Accordingly, it is necessary that *consistent with the principle of equitable utilization* of shared natural resources, States co-operate with a view to *controlling, preventing, reducing or eliminating adverse environmental effects* which may result from the utilization of such resources (emphasis added).

<sup>43</sup> The relationship of the two principles in the UN WCC continues to be debated. Brunnée/Toope, for example, argue that the UN WCC ties the two principles together in a circular relationship without resolving the priority issues and thereby neutralizing them, Brunnée, Jutta and Stephen J. Toope, The Changing Nile Basin Regime: Does Law Matter?, 43 Harvard International Law Journal, 105, 151 (2002).

states that develop their water resources later than others would be disadvantaged and new developments would be blocked leading to an inherently inequitable situation.

In the Gabcikovo-Nagymaros case the ICJ relied explicitly on the principle of equitable utilization<sup>44</sup>, but stated with regard to no-harm issues only that

The existence of the general obligations of States to ensure that activities within their jurisdiction and control *respect* the environment of other States or of areas beyond national control is now part of the corpus of international law relating to the environment.<sup>45</sup> (emphasis added)

The fact that the ICJ did not give more prominence to the no-harm rule despite Hungary relying heavily upon it in its arguments can be seen as a rejection of the thesis that the duty not to cause significant harm takes prominence over other rules. Also the term no “*significant* harm” shows that when the two principles must be reconciled some harm can be accommodated.

Reconciling the two principles in many cases requires the accommodation of some harm. In fact in the UN WCC convention it is ultimately the principle of equitable utilization that dominates which can be deduced from Art. 7 para. 2 UNWCC that states that “where significant harm is nevertheless caused to another watercourse State, the States whose use causes such harm shall, ..., take all appropriate measures, having due regard for the provisions of articles 5 and 6,” *i.e.*, the principle of equitable utilization, ..., “to eliminate or mitigate such harm and, where appropriate, to discuss the question of compensation.”

The no-harm principle is therefore limited by and only operates in conjunction with the principle of equitable utilization. It is the balancing of interests under the equitable utilization rule that has to solve the problem whether in a specific case a certain type of harm may be caused or not. The duty to consult with the affected state to eliminate or mitigate such harm, and to discuss compensation where appropriate (Art. 7 para. 2), alleviates the burden of this compromise for the state subject to harm.

The no-significant-harm obligation has inspired, and is embedded in, a number of watercourse agreements. Two examples for cases in which states settled disputes over activities that were causing harm to another state are the Rhine salt case and the Colorado River case. In the Rhine salt case it was France’s awareness of its obligation to not inflict significant harm by pollution via the salt wastes of its potash mining industry in the French Alsace region that led to the

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<sup>44</sup> See quotation *supra* p. 9.

<sup>45</sup> See Gabcikovo-Nagymaros Project, *supra* note 4, p. 241, para. 53.

1976 Convention on the Protection of the Rhine against Pollution by Chlorides.<sup>46</sup> It provided for a progressive reduction of chloride levels of the Rhine by injecting chloride ions into Alsatian subsoil. In the Colorado River example, Colorado River water was allocated to Mexico under a treaty concluded in 1944 between the United States and Mexico.<sup>47</sup> Due to increasing levels of salinity from intensive irrigation in the United States the quality of the allocated water deteriorated. This motivated Mexico and the United States to reach an agreement in 1973, known as Minute<sup>48</sup> 242<sup>49</sup>, submitted by the International Boundary and Waters Commission of the two States that calls for the United States to deliver to Mexico water that does not exceed a certain salinity level. To implement its obligations the United States unilaterally constructed a desalination plant in Arizona.

States create joint commissions as mechanisms to fulfil their no-harm duty. Often they are given functions with regard to new works.

Some bodies like the Franco-Swiss Genevese Aquifer Management Commission (created by the 1977 Arrangement on the Protection, Utilisation and Recharge of the Franco-Swiss Genevese Aquifer) give only technical opinions on the construction of new water extraction works on the aquifer and on the modification of existing ones (Art. 2 para. 2 and Art. 5)<sup>50</sup> In other cases commissions have the function of approving projects and measures, such as, notably, the Canada - United States International Joint Commission created under the 1909 Boundary Waters Treaty.<sup>51</sup> On occasion, inter-state commissions even have a direct licensing or permitting authority of proposed projects and measures of cross-border significance. This is the case of the Finnish-Swedish Frontier River Commission created under the 1971 Agreement between Finland and Sweden concerning Frontier Rivers.<sup>52</sup> The permission of this commission is, for example, required for any hydraulic construction works covered by the agreement and has to take into account various rules regarding the prevention or mitigation of harm

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<sup>46</sup> Convention on the Protection of the Rhine against Pollution by Chlorides, 3 December 1976, 16 ILM 265 (1977). The Convention only entered into force in 1985 when France ratified it after almost ten years and implementation of the agreement has not been fully achieved.

<sup>47</sup> Treaty between the United States of America and Mexico relating to the utilization of the Waters of the Colorado and Tijuana Rivers and of the Rio Grande, 3 February 1944; protocol signed at Washington 14 November 1944, Mexico - United States, [http://www.internationalwaterlaw.org/RegionalDocs/Co\\_Tj\\_RioG.htm](http://www.internationalwaterlaw.org/RegionalDocs/Co_Tj_RioG.htm) (last accessed 12 December 2002).

<sup>48</sup> A Minute is a decision of the International Boundary and Water Commission (IBWC) which is considered approved by the two governments if not objected to within thirty days, Art. 25 para. 2 Colorado, Tijuana Rivers and Rio Grande Treaty, *supra* 47.

<sup>49</sup> Agreement Approving Minute 242 of the IBWC Setting Forth a Permanent and Definitive Solution to the International Problem of the Salinity of the Colorado River, 30 August 1973, United States - Mexico, 12 ILM 1105 (1973).

<sup>50</sup> Arrangement relatif à la protection, à l'utilisation et à la réalimentation de la nappe souterraine franco-suisse du Genevois, 9 Juin 1977, Le Conseil d'Etat de la République et Canton de Genève – Préfet de Haute-Savoie, Art. 2.2, reprinted in: Teclaff, Ludwik A. and Albert E. Utton (eds.), *International Groundwater Law*, London, Rome, New York 1981, p. 464.

<sup>51</sup> *Supra* note 13.

<sup>52</sup> Agreement between Finland and Sweden Concerning Frontier Rivers, 16 September 1971, Finland – Sweden, 825 UNTS 191, English translation at 272.

or the payment of compensation for harm caused.<sup>53</sup> Joint commissions can even be instrumental in developing new agreements as in the case of the IBWC illustrated by the Columbia case mentioned above.

### **3. The Duty to Cooperate**

In Art. 8 para. 1 the UN WCC contains the general principle that "watercourse states shall cooperate on the basis of sovereign equality, territorial integrity, mutual benefit and good faith in order to attain optimal utilization and adequate protection of an international watercourse".<sup>54</sup> This general duty is reflected and specified in the procedural duty to regularly exchange data and information (Art. 9), and in the obligations of notification, consultation and negotiation concerning planned measures. Only these latter duties will be discussed.

#### **a) The Duty to Exchange Data and Information**

Art. 9 para. 1 UN WCC imposes upon states a duty to exchange "on a regular basis ... readily available data and information on the condition of the watercourse, in particular of its hydrological, meteorological, hydrogeological and ecological nature and related to the water quality as well as related forecasts".<sup>55</sup>

Such information from all parties concerned needs to be taken into account if a state wants to determine whether a specific use is reasonable and equitable, since the state has to assess the situation of all relevant parts of the shared watercourse. It would, for example, be very difficult for a downstream state to optimise its uses of an international watercourse without information about such matters as rainfall and the quality and flow of water in the upper parts of the basin. This therefore calls for information that cannot be gathered by the

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<sup>53</sup> *Id.*, Art. 3, 13, 16 (*inter alia*).

<sup>54</sup> A duty to cooperate can be found in a number of international instruments. See, for example, Art. 4 of the ILA's Rules on Water Pollution in an International Drainage Basin (Montreal Rules), reprinted in FAO, Sources of International Water Law, Legislative Study No. 65, Rome 1998, 314; Art. 3 of the Charter of Economic Rights and Duties of States Charter of Economic Rights and Duties of States, GA Res. 3281(xxix), UN GAOR, 29th Sess., Supp. No. 31 (1974), 14 ILM 251; or Principle 24 of the Stockholm Declaration, Declaration of the United Nations Conference on the Human Environment, 16 June 1972, UN. Doc. A/Conf.48/14/rev.1. A survey of international agreements, decisions of international courts and tribunals, declarations and resolutions adopted by intergovernmental organizations, conferences and meetings, and studies by intergovernmental and nongovernmental organizations relating to the principle of cooperation is contained in Third Report Special Rapp., (1987) Y.B.Int'l L. Comm'n, vol. 2, pt. 1, Doc. A/CN.4/406, paras. 43 – 58.

<sup>55</sup> The need for regular collection and exchange of a broad range of data has been recognised also in a large number of other international agreements. Art. XXIV para. 1 Helsinki Rules, *supra* note 16, states that "with a view to preventing disputes from arising ..., it is recommended that each basin State furnish relevant and reasonably available information to the other basin States concerning the waters of a drainage basin within its territory and its use of, and activities with respect to such waters." A survey of other agreements as well as of declarations and resolutions adopted by intergovernmental organizations, conferences and meetings as well as studies by intergovernmental and international non-governmental organisations can be found in Spec. Rapp., Fourth Report, (1988) Y.B.Int'l L. Comm'n, vol. 2, pt. 1, pp. 2105 *et seq.*, Doc. A/CN.4/412 and Add. 1 and 2, paras. 15 - 26.

assessing states unilaterally, but requires the provision and cooperative sharing of data and information between co-riparians. As the duty is limited to exchanging only "readily" available data, such as already collected data or easily accessible data,<sup>56</sup> it does not overburden states.<sup>57</sup> The regular and continuous exchange is furthermore a means of confidence building in itself.

The exchange of hydrological and hydro-geological data and information on a regular basis tends to be the lynchpin of many inter-state water-related treaties. Examples range from the complex and multipurpose Indus Water Treaty,<sup>58</sup> to the two concise technical agreements concluded among Egypt, Libya, Chad and Sudan on Monitoring and Exchange of Groundwater Information of the Nubian Sandstone Aquifer System<sup>59</sup> and on Monitoring and Data Sharing<sup>60</sup>. Therein the States commit themselves to regularly update a hydro-geological database of the Nubian Sandstone Aquifer System (NSAS), and to regularly share additional data from agreed monitoring activities.

Data and information exchange and management constitute also the bulk of the mandate of many inter-state commissions. Building on this core mandate the Mekong River Commission detailed the principles of cooperation laid down in the Mekong watercourse agreement<sup>61</sup>. It developed (on the basis of Art. 24 para. C of the Agreement) Procedures for Data Exchange and Information Exchange and Sharing that were adopted by the Mekong River Commission Council in November 2001<sup>62</sup>. On the basis of those still fairly general Procedures, Guidelines on Custodianship and Management<sup>63</sup> were developed (Art. 5.1 Procedures) and further technical standards and guidelines will be developed in the future to ensure comparability of data. Hence, in this particular case the general principle of customary international law was first incorporated into a treaty and later detailed by a joint body created to administer the treaty.

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<sup>56</sup> An example of a treaty employing the term "available" in reference to information to be provided is Art. VII para. 2 of the Indus Water Treaty, *supra* note 31.

<sup>57</sup> Art. 9 para. 2 UN WCC regulates the collection and processing of data that is not readily available. It stipulates that states have to employ their best efforts when faced with a request for such data by another state and that they may condition their compliance with the request upon payment for the costs arising.

<sup>58</sup> Indus Water Treaty, *supra* note 31. More examples can be found in Report of the ILC to the General Assembly on its forty-sixth session, reprinted in: (1994) Y.B.Int'l L. Comm'n, vol. 2, pt. 2, p. 109, U.N.Doc. A/CN.4/SER.A/1963/Add.1 (Part 2).

<sup>59</sup> Agreement for the Monitoring and Exchange of Groundwater Information of the Nubian Sandstone Aquifer System, 5 October 2000, Chad, Egypt, Libya, Sudan, on file with author.

<sup>60</sup> Agreement on Monitoring and Data Sharing, Chad, Egypt, Libya, Sudan, 5 October 2000, on file with author.

<sup>61</sup> *Supra* note 11.

<sup>62</sup> Mekong River Commission, Procedures for Data and Information Exchange and Sharing, 1 November 2002, <http://www.mrcmekong.org/pdf/Procedures.pdf> (last accessed 10 December 2002).

<sup>63</sup> Mekong River Commission, Guidelines on Custodianship and Management of the Mekong River Commission Information System, 11 July 2002, <http://www.mrcmekong.org/pdf/CustMgmtGuidelines.pdf> (last accessed 11 December 2002).



## b) Information, Notification and Consultation

Other obligations of cooperation concern planned measures. Part III of the UN WCC (Planned Measures) contains, among other duties, an obligation to inform and consult regarding the possible effects of planned measures (Art. 11) and, in case the planned measures could have significant adverse effects, a duty to notify (Art. 12). Whereas the duty to regularly exchange data and information (Art. 9) provides for an ongoing and systematic process, these provisions concern duties only arising in connection with planned measures - to be interpreted broadly as including new projects or programmes of a major or minor nature, as well as changes in existing uses of an international watercourse<sup>64</sup> - to enable co-riparians to realize the nature of the proposed undertaking and the possible effects. Thereby conflicts can be mitigated at an early stage. The obligation to provide prior notification of such planned measures was accepted by most delegations to the negotiations of the UN WCC except Ethiopia, Rwanda and Turkey,<sup>65</sup> providing evidence that states have no longer unfettered discretion to do as they alone wish with the portion of an international watercourse within their territory.<sup>66</sup>

The existence of such an obligation was still disputed in 1979 when an agreement concluded by Argentina, Brazil and Paraguay<sup>67</sup> on the coordination of separate water development projects planned on bi-lateral bases by these three countries on the Paraná River ended a bitter dispute between Argentina and Brazil over prior notification. Argentina was of the opinion that Brazil had an obligation to provide prior notification and technical details regarding the bi-lateral Brazilian/Paraguayan Itaipú project and to consult with Argentina because of concerns the project would adversely affect a dam it planned to construct with Paraguay further downstream on the Paraná. In the end, the 1979 agreement enshrined exactly these two obligations<sup>68</sup>. Another example is the 1973 agreement between Mexico and the United States addressing the issue of Colorado River water salinity and of unrestrained groundwater pumping on both sides of the Sonora-Arizona boundary obliging both countries “to consult with each other prior to undertaking any new development of either the surface or groundwater resources, or prior to undertaking substantial modifications of present developments, in its own territory in the border area that might adversely affect the other country”.<sup>69</sup> Although this agreement does not use the term “notify” this obligation to consult stems from the same *rationis materiae*.

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<sup>64</sup> (1994) Y.B.Int'l L. Comm'n, vol. 2, pt. 1, p. 111, Art. 11, para. 4.

<sup>65</sup> McCaffrey, The Contribution of the UN Convention on the Law of the Non-Navigational Uses of International Watercourses, 1 International Journal of Global Environmental Issues, 250, 256 (2001).

<sup>66</sup> *Id.*

In practice, states are always notified in cases where the World Bank helps to finance a water development project as the Bank's guidelines require notification, World Bank, Operational Manual, Bank Procedures 7.50, Projects on international waterways – Operational Policies, October 1994, paras. 2.

<sup>67</sup> Argentina-Brazil-Paraguay: Agreement on Paraná River Projects, 19 October 1979, English translation 19 ILM 615 (1980).

<sup>68</sup> *Id.* Art. 5 lit d).

<sup>69</sup> *Supra* note 49, Art. 6.

To receive prior notice of proposed projects and measures likely to have a significant cross-border impact also falls within the remit of most, inter-state commissions which thereby serve a function as recipients of information and notice. Examples are the Lake Chad Basin Commission<sup>70</sup> and Mekong River Commission<sup>71</sup>.

#### IV. Conclusion

Whether or not states have concluded agreements regarding a specific shared watercourse, the right of equitable and reasonable utilization, the duty not to cause significant cross-border harm, and the obligation to cooperate, determine and limit states' sovereignty and impose rights and duties upon states that are designed in a way that conflicting interests are reconciled in a manner acceptable for each party.

As the core principles set material objectives to be achieved as well as procedural duties, they have the potential of guiding states' negotiations towards mutually satisfactory results. In numerous cases they have been built upon by States and have functioned as a yardstick guiding states' behaviour. They are therefore useful not only – or not so much as – to gauge, *ex post*, the legitimacy of actual behaviour, but also, and more importantly, to discourage antagonistic claims and counter-claims and to encourage accommodation of the interests at stake in the process of reaching agreement.

The abstractness and generality of the core principles provide flexibility to accommodate in the framework of specific watercourse agreements the multitude of geographical, economic, technological, social and political factors potentially leading to diverging interests of states sharing a common watercourse. There exists now a sense of adherence to these core norms which all sovereign States identify with and use as a basis, to eventually shape agreements on the specific rules which will govern the circumstances of each particular case. Specific conflict situations are best dealt with if the general principles are given concrete meaning in a specific agreement that gives justice to the particularities of each case. The technical work of joint bodies created by such agreements is often of key importance for implementation and adjustment of agreements as well as for the creation of stronger ties of cooperation.

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<sup>70</sup> Art. 5 para. 2 Convention and Statutes Relating to the Development of the Chad Basin, 22 May 1964, Cameroon, Chad, Niger, Nigeria, <http://mgd.nacse.org/qml/watertreaty/textdocs/international/29.html> (last accessed 10 December 2002).

<sup>71</sup> Mekong River Commission, Preliminary Procedures for Notification, Prior Consultation and Agreement, 12 November 2002, Cambodia, Laos, Thailand and Vietnam, <http://www.mrcmekong.org/> (last accessed 10 December 2002).

This is not to say that conflict is or will not be there, or that it vanishes the moment two or more states sign a water treaty or agreement. Agreements can take the sting out of conflict situations, and make states less prone to open conflict. They are not a panacea, only a piece in the puzzle. The stronger the enmeshing and integrated management of a shared resource created by treaty-based cooperation, the more the interests of one party become the own interests of the other parties. Once a certain degree of interlacing and cross-linking is reached, a conflict carried out by force or even a break-off of cooperation is no longer an option as it would harm a state's own interests.