

## THE TIGRIS-EUPHRATES RIVERS CONTROVERSY AND THE ROLE OF INTERNATIONAL LAW

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### 1. INTRODUCTION

Historically, international law governing the utilisation of transboundary freshwater resources has been concerned with the issue of water allocation between riparian states. The first major recorded water dispute of legal significance dates back to 1895, when Mexico charged the United States of America with diverting water from the Rio Grande in violation of international law.<sup>1</sup> Before it eventually led to an agreement between Mexico and the US in 1906,<sup>2</sup> the US Attorney General Judson Harmon had delivered a legal opinion on the state of international law, which set the scene for years to come.<sup>3</sup> What became known as the Harmon Doctrine (the theory of absolute territorial sovereignty, granting a riparian state complete freedom of action with respect to the portion of an international river within its own territory regardless of its harmful consequences for other riparian states)<sup>4</sup> attracted another opposing extreme; the theory of absolute territorial integrity, favourable to lower riparian states.<sup>5</sup> Nevertheless, international law has since developed in such a way as to ensure equitable resolutions of international water disputes under the theory of limited territorial sovereignty.<sup>6</sup>

Be as it may, it is inaccurate to claim that international law is now adequately equipped to impose solutions on controversies of all sorts, irrespective of the political circumstances of the case and against the will of disputing parties.<sup>7</sup> The Tigris-Euphrates riparian states have failed for over three decades to reach an agreement on the use of the

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<sup>1</sup> Simsarian, James, 'The Diversion of Waters Affecting the United States and Mexico', *Texas Law Review*, 27, 1938, pp. 27-61

<sup>2</sup> Convention Concerning the Distribution of the Waters of the Rio Grande, signed in Washington on 21 May 1906, UN Document A/5409, *Yearbook of the International Law Commission*, II/2, 1974, p. 78.

<sup>3</sup> For the influence of the Harmon doctrine, see Austin, Jacob, 'Canadian-United States Practice and Theory Respecting the International Law of International Rivers: a Study of the History and Influence of the Harmon Doctrine', *Canadian Bar Review*, 37, 1959, pp. 393-443.

<sup>4</sup> For a more recent critical analysis, see McCaffrey, Stephen C., 'The Harmon Doctrine One Hundred Years Later: Buried, Not Praised', *Natural Resources Journal*, 36, 1996, pp. 549-90.

<sup>5</sup> Berber, F.J., *Rivers in International Law*, English translation by Batstone, R.K., London: Stevens & Sons Limited, 1959, pp. 19ff.

<sup>6</sup> For a more recent account of international watercourses law, see McCaffrey, Stephen C., *The Law of International Watercourses: Non-Navigational Uses*, Oxford: Oxford University Press, 2001, *passim*.

<sup>7</sup> In view of the absence of a supreme enforcement authority in international law, an increasing number of writers resort to importing non-legal approaches to the resolution of legal differences. A notable recent attempt to marry international law and hydro-politics is Elver, Hilal, *Peaceful Uses of International Rivers: the Euphrates and Tigris Rivers Dispute*, Ardsley, NY: Transnational Publishers Inc., 2002, *passim*.

ivers' water.<sup>8</sup> Not only does such failure have serious, far-reaching repercussions for the peace and prosperity of the riparian states but it may also threaten regional stability in the Middle East.<sup>9</sup> Consider the emerging concepts of environmental, ecological or water security.<sup>10</sup>

### 1.1. Facts and Figures

The Tigris and Euphrates rivers, both of which rise in the mountains of south-eastern Turkey, share a twin basin which passes through Syria and Iraq, leading to their confluence near Basra, where they join to form the Shatt-al-Arab in lower Iraq. After the Karun River joins the Shatt-al-Arab, it empties into the Persian Gulf.<sup>11</sup> With many of their physical, climatic, hydrologic and geomorphologic characteristics shared, it is common to treat them as a single basin for the purposes of integrated development and management.<sup>12</sup> It follows suit in law.

Table 1: Length of the Tigris and Euphrates Rivers within Riparian States (km)

River	Length	Turkey	Syria	Iraq
Euphrates	2,780	915	675	1,200
Tigris	1,900	523	32	1,345

Table 2: Basin Area of the Tigris and Euphrates within Riparian States

River	Area (km <sup>2</sup> )	Turkey	Syria	Iraq	Iran	Saudi Arabia
Euphrates	444,000	28%	17%	40%	-	15%
Tigris	471,606	12%	0.2%	54%	34%	-

Table 3: Riparian Contributions to the Tigris and Euphrates Annual Discharge (%)

River	Turkey	Syria	Iraq
Euphrates	88-90	10-12	nil
Tigris	52	nil	48

Table 4: Aggregate Figures for the Tigris and Euphrates Drainage Basin

<sup>8</sup> Ibid., pp. 343ff.

<sup>9</sup> Naff, Thomas and Matson, Ruth C., *Water in the Middle East: Conflict or Cooperation*, Boulder: Westview Press, 1984, pp. 1-16; Bulloch, John and Darwish, Adel, *Su Savaşları (Water Wars)*, Turkish translation by Mehmet Harmancı, Istanbul: Altın Kitaplar, 1994, pp. 53ff.; Şen, Sabahattin (Ed.), *Su Sorunu: Türkiye ve Ortadoğu (Water Issue: Turkey and Middle East)*, Istanbul: Bağlam Yayınları, 1993, pp. 361ff.; Beschorner, Natasha, *Water and Instability in the Middle East*, Adelphi Paper 273, London: IISS, 1992, pp. 2-7.

<sup>10</sup> Riemer, Andrea K., 'Water Issues and the Extended Understanding of 'Security': the Southeast Anatolia Project as a Multidimensional potential for Crisis?', *The Turkish Yearbook of International Relations*, 26, 1996, pp. 81ff.

<sup>11</sup> Koçabaş, I., *Türkiye'nin Sınırşan Suları: Dicle ve Fırat (Transboundary Waters of Turkey: Tigris and Euphrates)*, M.Phil. thesis (unpublished), Ankara: Institute of Turkish and Middle Eastern Public Administration, 1995, pp. 13ff.

<sup>12</sup> Soffer, Arnon, *Rivers of Fire: the Conflict over Water in the Middle East*, English translation by Rosovsky, Murray and Copaken, Nina, Lanham: Rowman & Littlefield Publishers, 1999, pp. 73ff.; Kliot, Nurit, *Water Resources and Conflict in the Middle East*, London: Routledge, 1994, p. 100.

	Percentage of Total Basin Area (808,000 Km <sup>2</sup> )	Percentage of Total Water Discharge (80-84 Billion m <sup>3</sup> )
Iraq	46.0	8-9
Turkey	20.5	70
Syria	9.0	2
Iran	19.0	21
Saudi Arabia	5.5	nil

Source: Koçabaş<sup>13</sup>

## 1.2. What is in Dispute?

In almost all international river disputes, competing uses of the riparian states come into conflict “where the quantity and quality of the water is such that all the reasonable and beneficial uses...cannot be realized to their full extent.”<sup>14</sup> This is the case with the Tigris and Euphrates rivers. Ever since Turkey, the uppermost riparian state, embarked in the early 1960s on a development project to harness the waters of the Euphrates River, the lower riparian states, Syria and Iraq, have gradually and increasingly complained to Turkey, mainly of reduced water volume. These complaints have increased in parallel with the growing size and number of the water installations envisaged on the upper reaches of the Tigris as well as the Euphrates.<sup>15</sup> In 1974, completion of the Keban dam on the Turkish portion of the Euphrates marked the first step of what is called the Southeastern Anatolian Project (*Güneydoğu Anadolu Projesi*, GAP), a gigantic project of integrated management of the entire Tigris and Euphrates river system within Turkey.<sup>16</sup> However, this was also the time when the disagreements between the three riparian states reached its peak, causing a full scale military confrontation between Syria and Iraq because the completion of the Keban dam in Turkey and the Ath-Thawrah dam in Syria coincided, thereby leaving Iraq with a substantially reduced volume of water in the dry summer months.<sup>17</sup>

Thus far, GAP has been the focal point of international attention. Turkey’s State Hydraulic Works describes it as a truly “integrated, multi-sectoral” development project, comprising 13 major projects (seven on the Euphrates and six on the Tigris), designed for hydropower generation and irrigation. The scheme envisages the construction of 22 dams and

<sup>13</sup> Koçabaş, op. cit. (fn. 11), section 1.

<sup>14</sup> Schwebel, Stephen M., ‘Third Report on the Law of the Non-Navigational Uses of International Watercourses’, UN Document A/CN.4/348, *Yearbook of the International Law Commission*, II/1, 1982, para. 41, p. 75.

<sup>15</sup> For an excellent study of the early developments see Sar, Cem, *Uluslararası Nehirlerden Endüstriyel ve Tarımsal Amaçlarla Faydalanma Hakkı (The Right to Utilise International Rivers for Industrial and Agricultural Purposes)*, University of Ankara Faculty of Politics, Ankara: Sevinç Matbaası, 1970, pp. 145-8.

<sup>16</sup> Bağış, Ali İhsan, *GAP Southeastern Anatolia Project: the Cradle of Civilization Regenerated*, Istanbul: Interbank-Aksoy Matbaası, 1989, *passim*; Kolars, John F. & Mitchell, William A., *The Euphrates River and the Southeast Anatolia Development Project*, Carbondale: Southern Illinois University Press, 1991, *passim*.

<sup>17</sup> Anderson, Ewan W., ‘Water: the Next Strategic Resource’, in Star, Joyce R. and Stoll, Daniel C. (eds.), *The Politics of Scarcity: Water in the Middle East*, Boulder: Westview Press, 1988, p. 13.

19 hydroelectric power plants on the Euphrates and Tigris rivers and their tributaries. On completion, it is hoped to achieve the irrigation of over 1.7 million hectares and the generation of 27 billion kWh of electricity annually with an installed capacity of 7,500MW. This would account for 19 per cent of the economically irrigateable area in Turkey (8.5 million hectares) and 22 per cent of its economically viable hydropower potential (118 billion kWh a year).<sup>18</sup>

The main the objections of the lower riparian states, Iraq and Syria, against GAP and Turkey’s counterclaims, can be summarised as follows:<sup>19</sup>

*i. Water Quantity*

A single cause of concern to all three riparian states is the excessive demand for water resources that each of them places on the Tigris and Euphrates rivers. Put simply, the current demand outstrips the existing water supply by 17.3 billion m<sup>3</sup> a year in the Euphrates River and 5.8 billion m<sup>3</sup> in the Tigris River.

Table 5: Water Potential and Consumption Targets (billion m<sup>3</sup> a year)

River	Riparian	Water Potential	Consumption Target	Deficit
<b>Euphrates</b>	Turkey	31.58 (88.7%)	18.42 (35%)	
	Syria	4 (11.5%)	11.3 (22%)	
	Iraq	nil	23 (43%)	
	Total:	35.58	52.92	17.3
<b>Tigris</b>	Turkey	25.24 (51.8%)	6.87 (13%)	
	Syria	nil	2.6 (4%)	
	Iraq	23.43 (48.1%)	45 (83%)	
	Total:	48.67	54.47	5.8

Source: Turkish Ministry of Foreign Affairs<sup>20</sup>

The question is then one of ascertaining water rights vested in each riparian state.<sup>21</sup> What can be done to ensure that each state’s equality of right to water is preserved? That is where international law comes into play but not in clear terms! It is beyond argument that a conflict of uses calls for some sort of adjustment or accommodation to be made in the way in which each state exercises its water rights. Nevertheless, there is a considerable disagreement between Iraq, Syria and Turkey on the determination and implementation of legal principles

<sup>18</sup> DSI, *Turkey & GAP*, at <http://www.dsi.gov.tr/gap.htm>  
<sup>19</sup> Elver, op. cit. (fn. 7), pp. 343ff.  
<sup>20</sup> Turkish Ministry of Foreign Affairs, *Water Issues between Turkey, Syria and Iraq*, Ankara: Department of Regional and Transboundary Waters, June 1996, pp. 4f.  
<sup>21</sup> Scott, Anthony and Coustalin, Georgina, ‘The Evolution of Water Rights’, *Natural Resources Journal*, 35, 1995, pp. 821ff.

applicable to the dispute.<sup>22</sup> As in most cases, reconciling respective interests entails a long and arduous process of political negotiations between the disputed parties. And co-operation is always a fundamental tenet of any attempt to arrive at a negotiated solution.<sup>23</sup>

ii. *Water Quality*

In addition to the water allocation issues, more recent downstream complaints have included a serious concern about the quality of waters.<sup>24</sup> Although Turkey's use of water has so far been limited mainly to hydropower generation and irrigation and the former type of use is considered non-consumptive and not directly linked to water quality, the return flow from irrigation causes water pollution, which in turn affects potential downstream uses.<sup>25</sup> Equally important are natural causes for environmental concern in the sense that some residual characteristics common to both rivers exacerbate the deleterious effects of human pollution. Notable natural causes are the high rate of evaporation, sharp climatic variations, the accumulation of salts and sediments, poor drainage and low soil quality in the lower reaches of the Tigris and Euphrates rivers.<sup>26</sup>

iii. *Regulation of the River Flow*

A Mediterranean-mountainous climate of continental nature generates wide fluctuations in discharge, causing irregularities in the Tigris and Euphrates flow regimes, not only seasonally but also from year to year. To illustrate, the low and high water in the Tigris fluctuates between the ratio of 1 to 80 at Baghdad and 1 to 28 in the Euphrates at Hit, Iraq.<sup>27</sup> Hence, regulation of the volatile flow of the Tigris and Euphrates rivers is a very important issue to be resolved among the riparian states, due to their susceptibility to periodic floods and draughts in the lower reaches. It is argued that GAP greatly facilitates the much-needed control of water flow.<sup>28</sup>

### 1.3. Means of Resolution

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<sup>22</sup> Shapland, Greg, *Rivers of Discord: International Water Disputes in the Middle East*, London: Hurst & Co., 1997, pp. 155ff.

<sup>23</sup> Benvenisti, Eyal, *Sharing Transboundary Resources: International Law and Optimal Resource Use*, Cambridge: Cambridge University Press, 2002, pp. 19f.

<sup>24</sup> Iraqi Ministry of Foreign Affairs and Ministry of Irrigation, *The Diversion of Waters in the International Law: Facts on the Joint Waters with Turkey*, Baghdad, 1999, p. 17.

<sup>25</sup> Kolars, John, 'Problems of International Rivers Management: the Case of the Euphrates', in Biswas, Asit (ed.), *International Waters of the Middle East: from Euphrates-Tigris to Nile*, Bombay: Oxford University Press, 1994, p. 77.

<sup>26</sup> Shapland, op. cit. (fn. 22), p. 115.

<sup>27</sup> Cressey, George B., 'Geographical Review: the Shatt al-Arab', *Middle East Journal*, 12, 1958, p. 450.

<sup>28</sup> Turkish Ministry of Foreign Affairs, *Facts About Euphrates-Tigris Basin*, Ankara: Centre for Strategic Research, 1996, p. 12; Tekeli, Sahim, 'Turkey Seeks Reconciliation for the Water Issue Induced by the Southeastern Anatolia Project (GAP)', *Water International*, 15, 1990, p. 214.

Three decades may hardly seem a long enough time to end a dispute, but what became a distinct characteristic of this particular conflict is a constant lack of progress. The current stage of negotiations, which came to a halt several years ago, is marked by the absence of a collective political will to co-operate towards an equitable solution.<sup>29</sup> Nonetheless, the previous negotiations involved various attempts to explore the political, legal and technical aspects of the issues and to develop corresponding approaches to settling the differences, all of which appeared to be doomed by failure to reach a consensus on the legal concepts and criteria to follow. Of those credible alternatives, hydro-politics has emerged as a preferred approach to conflict resolution in this case.<sup>30</sup> Yet, Turkey made a more promising attempt by proposing the ‘Three-staged Technical Plan for Optimum, Equitable and Reasonable Utilisation of the Transboundary Watercourses of the Euphrates and Tigris Basin’ at the Fourth Meeting of the Joint Technical Committee between 5 and 8 November 1984. Turkey reiterated this plan at the Tripartite Meeting at the Ministerial Meeting on 26 June 1990 and during the follow-up bilateral talks with Syria and Iraq in 1993.<sup>31</sup> In spite of Syria and Iraq’s reluctance to consider this technical approach, the three-staged plan of identifying the criteria for equitable and reasonable utilisation has its merit in the modern development of international watercourse law.<sup>32</sup>

This paper argues that international law governing the utilisation of international watercourses has a significant role to play in facilitating a co-operative means of equitably resolving the Tigris and Euphrates rivers conflict by way of offering a workable array of concepts and criteria for water rights. It is not, however, appropriate to examine all aspect of the law in the limited scope of the present paper. Rather, our brief survey of substantive legal rules and principles will be confined to the known views of the disputed parties.

## 2. THE ROLE OF INTERNATIONAL LAW

Turkey’s argument that “no comprehensive set of rules or principles of general international law or international customary law formally defines the rights and obligations” of a watercourse state, probably still holds true to some extent.<sup>33</sup> Nor is there any means other than international agreements to clarify their respective rights and obligations.<sup>34</sup> Having said that, there are individual substantive principles that have acquired a normative status in

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<sup>29</sup> cf. Kibaroglu, Aysegül, ‘Prospects for Cooperation in the Euphrates-Tigris Basin’, *Turkish Review of Middle East Studies*, 8, 1994-5, pp. 197ff.

<sup>30</sup> Çarkoğlu, A., Eder, M. and Kirişçi, K., *Political Economy of Regional Cooperation in the Middle East*, London: Routledge, 1998, *passim*; also see Elver, op. cit. (fn. 7), p. xxi.

<sup>31</sup> Turkish Ministry of Foreign Affairs, *Water Issues between Turkey, Syria and Iraq*, Ankara: Department of Regional and Transboundary Waters, June 1996, p. 21.

<sup>32</sup> For an excellent analysis of those criteria see Fuentes, Ximena, ‘The Criteria for the Equitable Utilisation of International Rivers’, *British Yearbook of International Law*, 67, 1996, pp. 337ff.

<sup>33</sup> Turkish Ministry of Foreign Affairs, *Annexed Background Paper on International Law Issues Concerning the Euphrates/Tigris Watercourse System*, Ankara, 1990, p. 3.

<sup>34</sup> *Ibid.*

international customary law with a binding effect on the rights and obligations of watercourse states. Coupled with procedural requirements, these can provide a basis for agreed solutions. Added to them, modern international law offers a number of principles, ‘soft’ in nature, to guide states to act in a precautionary manner, which the international community deems desirable in responding to today’s imminent environmental problems. The latter are not *per se* binding principles, but may exert a considerable influence on the states’ exercise of water rights.<sup>35</sup>

## 2.1. Setting a Legal Framework for Water Allocation

The historical development of international law governing international rivers is impressive, revolving around four theories:

### i. *Absolute Territorial Sovereignty*

The Harmon doctrine – in the absence of rules, principles and precedents of international law to impose an obligation upon riparian states, every state enjoys absolute and exclusive sovereign rights to water within its own territory and is free to do as it pleases with those waters irrespective of any adverse affects on the use and supply of the waters within another riparian state’s territory.

### ii. *Absolute Territorial Integrity*

The lower riparian state has the right to a full flow of water of natural quality and the upstream state’s interference with the natural flow of a successive river is thus subject to the consent of the lower riparian.

### iii. *Limited Territorial Sovereignty*

The doctrine of equitable utilisation - the riparian state’s sovereign right is limited by a correlative obligation not to cause substantial harm to the other riparian states on the basis of equality of rights, which calls for equitable utilisation to be made of water to accommodate their respective needs and interest.

### iv. *Community of Interests*

The common management formula - there is a community of interests in water, created by the natural unity of a watercourse, which forces the riparian states into a co-operative legal relationship of physical interdependence to manage the watercourse basin as an integrated whole in the most efficient way to attain optimum, equitable and reasonable utilisation and sustainable development as if there are no borders between them.<sup>36</sup>

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<sup>35</sup> Hohmann, Harald, *Precautionary Legal Duties and Principles of Modern International Environmental Law: the Precautionary Principle: International Environmental Law between Exploitation and Protection*, London: Graham & Trotman, 1994, pp. 166ff.

<sup>36</sup> McCaffrey, op. cit. (fn. 6), chapters 5; also see Lipper, Jerome, ‘Equitable Utilization’, in Garretson, Albert H., Hayton, Robert D. and Olmstead, Cecil J. (eds.), *The Law of International Drainage Basins*, New York: Oceana Publications, 1967, pp. 18ff.

### 2.1.1. Substantive Rules and Principles

In defining their right to use the waters of the Tigris and Euphrates rivers, Turkey relies on the principle of equitable and reasonable utilisation, whereas Iraq and Syria employ the no significant harm principle.<sup>37</sup> Although it may imply a contradiction in itself, suffice to say, there is now a decisive authority, stemming from state practice, for the existence of both principles as part of international customary law.<sup>38</sup> Again both seem to serve, under the theory of limited territorial sovereignty, the same purpose of reconciling the exclusive right to utilise the waters and the absolute right to demand their unimpaired flow, vested in the co-riparian states. They are different expressions of the idea of the community of states, based on their physical interdependence in the transboundary watercourse basin, as a result of the growing awareness of hydrologic realities.<sup>39</sup> To reconcile the national interests of a state with those of the international community, article 21 of the 1972 Stockholm Declaration on the Human Environment made an early attempt to strike a balance between the sovereign right of a state to make use of the natural resources within its own territory and the corollary obligation not to cause damage to the environment of other states.<sup>40</sup>

#### *Equitable Utilisation*

It is fair to say that the law of international watercourses has developed around the doctrine of equitable utilisation, authoritatively formulated as a substantive legal principle of water allocation by the International Law Association in its 1966 Helsinki Rules on the Uses of International Rivers.<sup>41</sup> More recently, article 5 of the 1997 UN Convention on the Law of the Non-Navigational Uses of International Watercourses has restated it as the overarching principle governing the utilisation of international watercourses.<sup>42</sup> In 1997, the customary status of the sovereign right to utilise an international watercourse in an equitable and reasonable manner as the fundamental substantive legal norm was also confirmed by the International Court of Justice in the case concerning the Gabcikovo-Nagymoros Project between Hungary and Slovakia.<sup>43</sup> Despite the simplicity of the requirement embodied in the principle, the question of what ‘equity’ and ‘reasonableness’ are still needs to be identified in

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<sup>37</sup> Elver, *op. cit.* (fn. 7), pp. 409-18.

<sup>38</sup> McCaffrey, *op. cit.* (fn. 6), chapters 9-10.

<sup>39</sup> For the holistic approach to water problems, see McCaffrey, Stephen, ‘International Organisations and the Holistic Approach to Water Problems’, *Natural Resources Journal*, 31, 1991, p. 139.

<sup>40</sup> Sohn, Louis, ‘The Stockholm Declaration on the Human Environment’, *Harvard International Law Journal*, 14, 1973, pp. 423ff.

<sup>41</sup> Bourne, Charles, ‘International Law Commission’s Draft Articles on the Law of International Watercourses: Principles and Planned Measures’, *Colorado Journal of International Law and Policy*, 3, 1992, p. 82.

<sup>42</sup> Tanzi, Atilla and Arcari, Maurizio, *The United Nations Convention of the Law of International Watercourses: a Framework for Sharing*, The Hague: Kluwer Law International, 2001, pp. 95ff.

<sup>43</sup> ‘Case concerning the Gabcikovo-Nagymaros Project between Hungary and Slovakia 25 September 1997’, *ICJ Reports*, 1997, pp. 7ff.



general international law.<sup>44</sup> Also problematic is the actual application of the principle to a case. In practice, it entails a balance of interests, which accommodates the needs and uses of each riparian state.<sup>45</sup> The idea of a community of interests, recognised in navigation by the Permanent Court of International Justice in the River Oder Case, was then implicitly followed in the context of non-navigational uses by the Tribunal in the Lake Lanoux case.<sup>46</sup> Birnie and Boyle aptly argue that the implementation of the principle of equitable and reasonable utilisation “turns on a balancing of relevant factors and must be responsive the circumstances of individual cases.”<sup>47</sup> To that end, both the Helsinki Rules and the 1997 UN Convention list a number of factors relevant to equitable and reasonable utilisation.<sup>48</sup> In so far as the apportionment of the Tigris and Euphrates waters is concerned, Turkey’s proposal in the Three-staged Technical Plan, involving inventory studies of the water resources in the first stage and of land resources in the second stage, followed by an evaluation stage, appears to be in full conformity with the generally agreed ways of determining an equitable balance between each riparian state’s right to water in international practice.<sup>49</sup> In doing so, one issue remains unresolved: Iraq and Syria’s historical rights claim to the Tigris and Euphrates waters which, they maintain, have an acquired priority and precedence over Turkey’s existing and future rights, however reasonable or beneficial they may be. Lipper points out that “in international river law, there is no doctrine of prior appropriation applying inflexibly the ‘prior in time, prior in right’ concept as applied internally by some states. [...] Although temporal priority between such [existing] uses is not wholly irrelevant, it becomes but a factor among many, some of which may be of much greater significance.”<sup>50</sup> In full agreement, McCaffrey states, “while priority of use is an important consideration, priority alone is not decisive. Even less is the place where the watercourse system originates controlling.”<sup>51</sup>

### ***Harmless Use***

Like the foregoing equitable utilisation, the no-harm principle enjoys some significant support in international law.<sup>52</sup> Its origin can arguably be found in the maxim, *sic utere tuo ut*

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<sup>44</sup> Fuentes, op. cit. (fn. 32).

<sup>45</sup> Handl, Günter, ‘International Liability for the Pollution of International Watercourses: Balancing of Interests’, *Canadian Yearbook of International Law*, 13, 1975, pp. 156ff.; Handl, Günter, ‘The Principle of ‘Equitable Use’ as Applied Internationally Shared Natural Resources: its Role in Resolving Potential International Disputes over Transfrontier Pollution’, *Revue belge de droit international*, 14, 1978, pp. 40ff.

<sup>46</sup> For summary see Green, L.C., *International Law through the Cases*, London: Stevens & Sons, 1970, pp. 351ff and 361ff.

<sup>47</sup> Birnie, Patricia W. and Boyle, Alan E., *International Law and the Environment*, 2nd edn., Oxford: Oxford University Press, 2002, p. 303.

<sup>48</sup> Article 5 of the 1966 Helsinki Rules and article 6 of the 1997 UN International Watercourses Convention.

<sup>49</sup> Cf. Klot, op. cit. (fn. 12), chapter 2 and Soffer, op. cit. (fn. 12), chapter 3.

<sup>50</sup> Lipper, op. cit. (fn. 36), pp. 57f.

<sup>51</sup> McCaffrey, op. cit. (fn. 6), p.327.

<sup>52</sup> Bruhacs, Janos., *The Law of Non-Navigational Uses of International Watercourses*, Dordrecht: Martinus Nijhoff, 1993, pp. 121ff.

*alienium non laedas* (use your own so as not to harm that of another).<sup>53</sup> It has also been associated with the general principles of law such as abuse of rights and good neighbourliness. At any rate, there is sufficient evidence in treaty practice and other international instruments for its existence, albeit in broad terms, as a customary principle of international law, which has been, on occasions, confirmed in case law. The Tribunal in the Trail Smelter arbitration, the International Court of Justice in the Corfu Channel case, and the Arbitral Tribunal in the Lake Lanoux case all recognised the relevance of the obligation of a state not to cause harm to others but not without certain qualifications.<sup>54</sup> Thus, its apparent simplicity is deceptive as it is open to interpretation that essentially depends on the definition of the terms ‘damage’, ‘harm’ or ‘injury’. Moreover, the threshold used to qualify the harm that it aims to prevent is set by the use of adjectives such as ‘appreciable’, ‘important’, ‘significant’, ‘substantial’, ‘considerable’ and ‘grave’.<sup>55</sup> There is general agreement that this is not an obligation of result but an obligation of conduct, which requires a due diligent standard on the part of perpetrator. However, that standard is no longer in article 7 of the 1997 UN Convention, which provides that “watercourse states shall [...] take all appropriate measures to prevent the causing of significant harm to other watercourse states.”<sup>56</sup> The joint position of Syria and Iraq seems to lean on the no-harm principle in preference to that of equitable utilisation. Within that context, as opposed to the Three-staged Plan, they propose that the Tigris and Euphrates river water be shared through a ‘simple’ mathematical formula, whereby:

a. Each riparian state is free to determine its demand for water as separate for each river; and

b. Should the declared demands exceed the water available in the rivers, then the excess would be proportionally deducted from the each riparian state’s share.<sup>57</sup>

Obviously, the term ‘sharing’ used in this sense poses all sorts of difficulties in terms of the definition of international watercourses as one of shared natural resources. So does the concept of ‘shared natural resources’ with rather dubious legal implications for the sovereign right of a riparian state to utilise the waters, flowing through the portions of an international river within its own territory.<sup>58</sup> Moreover, there seems to be a conceptual confusion inherent in this mathematical formula, which is based on an equal sharing at the discretion of each

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<sup>53</sup> For an opposing view, see Lammers, Johan G., *Pollution of International Watercourses: a Search for Substantive Rules and Principles of Law*, The Hague: Martinus Nijhoff, 1984, pp. 570ff.

<sup>54</sup> For those cases see above, fn. 46.

<sup>55</sup> Sachariew, Kamen, ‘The Definition of Threshold of Tolerance for Transboundary Environmental Injury under International Law: Development and Present Status’, *Netherlands International Law Review*, 37, 1990, pp. 193ff.

<sup>56</sup> For a detailed analysis see Tanzi and Arcari, op. cit. (fn. 42), pp. 142ff.

<sup>57</sup> Turkish Ministry of Foreign Affairs, *Water Issues Between Turkey, Syria and Iraq*, Ankara: Department of Regional and Transboundary Waters, June, 1996, pp. 15f.

<sup>58</sup> Erdem, Mete, ‘The Legal Analysis of a Geographical Concept: ‘International Watercourse Basins’’, in Tarhanlı, Turgut (Ed.), *Human Rights, Law and State in a Changing World: in Honour of Professor Edip F. Çelik*, Istanbul: Engin Yayıncılık, 1995, pp. 140ff.

riparian state. However, to preserve each state's equality of right – which is not to be confused with entitlement to an equal share of the water – the above said adjustments or accommodations in the case of a conflict of uses need to be calculated on the basis of equity.

### ***The Relationship between Harmless Use and Equitable Utilisation***

The disagreement between Turkey, Syria and Iraq over what principle should prevail is a source of profound controversy in the doctrine, which the formulation of articles 5 and 7 in the 1997 UN Convention has failed to remove. In situations such as the Tigris and Euphrates rivers dispute, when the principles of equitable utilisation and harmless use are incompatible and come into conflict, much depends on interpretation.<sup>59</sup> Although there are some writers attempting to reconcile them,<sup>60</sup> the doctrine is sharply divided between those who favour the dual test approach advocating the supremacy of the principle of equitable and reasonable utilisation in the form of the 1966 Helsinki Rules,<sup>61</sup> and those who interpret the last minute reformulating of article 7 of the 1997 UN Convention to indicate the preference for the harmless use principle.<sup>62</sup>

#### 2.1.2. Soft Approaches to Substantive Principles

### ***Optimum Utilisation***<sup>63</sup>

Turkey claims that the ultimate objective of its Three-staged Plan is to realise the optimum utilisation of the water resources of the Tigris and Euphrates basin. This is hardly a new concept in international law but it has recently gained currency with the emergence of the notion of sustainable development. It is included in article 5 of the 1997 UN Convention without shedding much light on its normative basis or implications for the principles of equitable utilisation and harmless use.<sup>64</sup> Nevertheless, references to optimality have often been made to imply maximisation of the economic utility of watercourse basins as a unitary whole.<sup>65</sup> Therefore, optimising the use of freshwater resources purports to attain the integrated development and management of an international watercourse system in order to yield the maximum possible benefit for all the states concerned as if state frontiers did not intersect the

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<sup>59</sup> Erdem, Mete, 'Kitap İncelemesi: Akmandor, N., Pazarcı, H. ve Koni, H., Ortadoğu Ülkelerinde Su Sorunu, ...' ('Book Review: Water Issues in the Middle Eastern Countries'), *Istanbul University International Law Bulletin*, 13, 1993, pp. 50ff.

<sup>60</sup> Birnie and Boyle, op. cit. (fn. 47), pp. 307ff.; McCaffrey, op. cit. (fn. 6), pp. 370f.

<sup>61</sup> Bourne, Charles, 'The Primacy of the Principle of Equitable Utilisation in the 1997 Watercourses Convention', *Canadian Yearbook of International Law*, 35, 1997, pp. 215ff.

<sup>62</sup> Fitzmaurice, Malgosia, 'Convention on the Law of the Non-Navigational Uses of International Watercourses', *Leiden Journal of International Law*, 10, 1997, p. 506

<sup>63</sup> Hafner, Gerhard, 'The Optimum Utilisation Principle and the Non-Navigational Uses of International Drainage Basins', *Austrian Journal of Public International Law*, 45, 1993, pp. 113ff.

<sup>64</sup> Tanzi and Arcari, op. cit. (fn. 42), pp. 104ff.

<sup>65</sup> McCaffrey, Stephen C., 'Third Report on the Law of the Non-Navigational Uses of International Watercourses', UN Document A/CN.4/406 and add. 1 & 2, *Yearbook of the International Law Commission*, II/1, 1987, para. 30, p. 22.

watercourse.<sup>66</sup> This idea derives from the theory of a community of interests in water that treats a watercourse basin as a hydrographical unity of common economic importance to the all co-basin states, which are required to manage it as an integrated whole in the most beneficial manner to achieve full utilisation while avoiding economically wasteful parallel uses made independently and individually.<sup>67</sup> It clearly requires some form of institutionalised co-operation.<sup>68</sup> Furthermore, optimality is linked to the principle of sustainable utilisation within the context of efficiency and beneficial uses. Iraq and Syria have rejected the Turkish proposal for optimal use because they would be disadvantaged by the economic power of Turkey. In addition, the physical characteristics of the basin will always favour Turkey's achievement of a much higher degree of efficiency and benefit from its projects.<sup>69</sup>

### ***Sustainable Utilisation***<sup>70</sup>

This is a complex principle, which aims to ensure that access to natural and environmental assets of renewable freshwater resources does not decrease over time.<sup>71</sup> It thus represents the normative aspect of conservation to tackle natural environmental resource scarcity through environmentally sound management of renewable resources within the ambit of sustainable development.<sup>72</sup> References to sustainable use in the 1997 UN Convention should be regarded as part of the emerging array of soft law principles in the progressive development of the law of international watercourses.<sup>73</sup>

### ***Precautionary Action***<sup>74</sup>

This is a better-known aspect of sustainable development, geared towards pollution prevention. It is due to the lack of scientific knowledge that adopting an anticipatory environmental policy (based primarily on risk-averse strategies rather than a reactionary policy of postponement of preventive measures) calls for a precautionary approach to the sustainable utilisation of an international watercourse basin.<sup>75</sup> A number of international

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<sup>66</sup> Utton, Albert E., 'International Water Quality Law', *Natural Resource Journal*, 13, 1973, p. 310.

<sup>67</sup> Lipper, op. cit. (fn. 36), pp. 38ff.

<sup>68</sup> Boyle, Alan E., 'The Principle of Co-operation: the Environment', in *The United Nations and the Principles of International Law: Essays in Memory of Michael Akehurst*, Edited by Lowe, Vaughan and Warbrick, Colin, London: Routledge, 1984, pp. 120ff.

<sup>69</sup> Elver, op. cit. (fn. 7), p. 427.

<sup>70</sup> Birnie and Boyle, op. cit. (fn. 47), pp. 316ff.

<sup>71</sup> Pearce, David, Barbier, Edward and Markandya, Anil, *Sustainable Development: Economics and the Environment in the Third World*, London: Earthscan Publications, 1990, pp. 3ff.

<sup>72</sup> O'Riordan, Timothy, 'The Politics of Sustainability', in Turner, R.K. (ed.), *Sustainable Environmental Management: Principles and Practices*, Boulder: Westview Press, 1988, pp. 30ff.

<sup>73</sup> For a detailed study, see Erdem, Mete, 'Sustainable Utilisation of International Watercourses: a Legal Overview', *Istanbul University International Law Bulletin*, 12, 1992, pp. 41ff.

<sup>74</sup> Sands, Philippe, *Principles of International Environmental Law*, Vol. 1, Manchester: Manchester University Press, 1995, pp. 208ff.

<sup>75</sup> For various aspects of the precautionary principle, see *passim*, O'Riordan, Tim and Cameron, James (eds.), *Interpreting the Precautionary Principle*, London: Cameron May, 1994; O'Riordan, Tim, Cameron, James and Jordan, Andrew (eds.), *Reinterpreting the Precautionary Principle*, London: Cameron May, 2001; Freestone,

instruments contain the precautionary principle but its ambiguous legal implications cast doubt on the normative character to transform it into a binding hard law principle.<sup>76</sup>

## 2.2. Tentative Remarks: a Way Forward

The foregoing brief analysis of international law has demonstrated that there are well-established substantive legal rules and principles governing international rivers, which should provide an adequate basis for a negotiated settlement of disputes. This can be best achieved by agreements.

Turkey, Syria and Iraq have taken very important steps to ensure that there is a dialogue between all three of them. The most significant shift in approach came in 1980, when Iraq accepted Turkey's proposal to place an emphasis on the scientific and technical aspects of their differences, which led to the signing of a Joint Economic Protocol whereby a Joint Technical Committee was set up to consider the water issues. At its third annual meeting in 1983, Syria too joined and the Committee had met sixteen times, including ministerial level meetings, by 1992. It is in this period that the parties developed some degree of understanding of each other's legal positions, which resulted in a protocol signed between Turkey and Syria in 1987, committing the former to releasing an annual average of 500m<sup>3</sup> per second of water in the Euphrates river. The reason for the subsequent collapse of the negotiations at the technical level was attributed to the insistence of the Iraqi and Syrian delegation on the conclusion of a final agreement to determine water rights by equal sharing as against Turkey's Three-staged Plan for optimum, equitable and reasonable use. In the following year, Syria and Iraq jointly requested that the tripartite negotiations proceed on a political level only. A series of meetings in 1993 failed to induce the parties to moderate their position: Turkey insisted on the optimal, equitable and rational allocation of all transboundary waters, whereas Syria and Iraq maintained their stance of sharing the waters individually and independently in each separate river by means of a mathematical formula of equal sharing.<sup>77</sup> Since then, no discernible progress has been recorded and each state has carried on with its own plans but not without severe consequences. Increasingly so, an emphasis has been placed on the political aspects of the dispute with the addition of a new dimension: terrorism based in Syria (which continued to provide material support for Marxist Kurdish separatists operating against Turkey).<sup>78</sup> The current trend is to seek solutions in the context of hydro-politics.

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David and Hey, Ellen (eds.), *The Precautionary Principle and International Law: the Challenge of Implementation*, The Hague: Kluwer Law International, 1996.

<sup>76</sup> Birnie and Boyle, op. cit. (fn. 47), pp. 115-21.

<sup>77</sup> Turkish Ministry of Foreign Affairs, *Transboundary Waters* (in Turkish), Ankara: EIUK-III, 10 February 1994, pp. 16-9; Iraqi Ministry of Foreign Affairs and Ministry of Irrigation, *The Diversion of Waters in the International Law: Facts on the Joint Waters with Turkey*, Baghdad, 1999, pp. 15f.

<sup>78</sup> Oktav Alantar, Özden Z., 'Turkish-Syrian Relations at the Crossroads', *Turkish Review of Middle East Studies*, 11, 2000-1, pp. 149ff.

However, such efforts need to be complemented by international law, which is capable of providing a co-operative structure for conflict resolution.

Article 8 of the 1997 UN Convention stipulates a general obligation to co-operate, widely regarded as an expression of customary international law.<sup>79</sup> To the same effect, recent years have witnessed the emergence of the procedural law of co-operation as affording a distinct means of facilitating the implementation and enforcement of the substantive principles by way of developing non-contentious compliance mechanisms to avoid disputes and to settle them peacefully in a non-adversarial manner once they have arisen.<sup>80</sup> This form of institutionalised co-operation is not the only way forward, but certainly the most viable alternative available to Turkey, Syria and Iraq, to conduct constructive negotiations leading to a fair and sustainable agreement.<sup>81</sup>

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<sup>79</sup> For details see Tanzi and Arcari, *op. cit.* (fn. 42), chapter 4.

<sup>80</sup> Higgins, Rosalyn, *Problems & Process: International Law and How We Use it*, Oxford: Clarendon Press, 1994, p. 136.

<sup>81</sup> Benvenisti, *op. cit.* (fn. 23), pp. 101ff.