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Salman M.A. Salman

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DAMS, INTERNATIONAL RIVERS, AND RIPARIAN STATES: AN ANALYSIS OF THE RECOMMENDATIONS OF THE WORLD COMMISSION ON DAMS

SALMAN M. A. SALMAN*

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INTRODUCTION

Dams are built for varying purposes. Dams may be built to generate hydro-electric power, or to store and divert water for irrigation, water supply, or flood control. Construction of dams for any of these purposes usually alters or diverts river flow and could adversely affect existing water rights of riparian states. Such adverse effects can be quantitative, qualitative, or both, and can extend to downstream as

* Lead Counsel, Legal Department, The World Bank. The views expressed in this article are those of the author and do not reflect the views of the World Bank. The author would like to thank Professor Charles Bourne for assistance with some aspects of this article.

well as to upstream riparian states. Thus, dams have become a major source of tension between riparian states. Such tension has escalated in some parts of the world into disputes over the rights and obligations of the riparian states over the shared rivers.

It should be emphasized at the outset that not every river in the world has been affected by construction of a dam; only about fifty percent of the world rivers have dams built on them.¹ It is also worth noting that not every river affected by a dam is an international river. Many of the international discussions on the issue of dams place special emphasis on the environmental and social effects of dams. However, there has been limited discussion on the rights and obligations of the riparian states, which share the international river where the dam is built. Indeed, in 1996 the Operations Evaluation Department of the World Bank issued a report (the "OED Report") that reviewed fifty large dams in some thirty countries, but the OED Report primarily focused on development objectives and the social and environmental impacts of each of the dam projects. The OED Report "finds that the projects have a mixed record in their treatment of displaced people and their effects on the environment."² Although a number of those dams were built on international rivers, there was no discussion of riparian rights and obligations in the OED Report.

Following publication of the OED Report in August 1996, the World Conservation Union (IUCN) and the World Bank organized a workshop in Gland, Switzerland, in April 1997 ("Gland Workshop"). The objectives of the Gland Workshop were: (i) to review the Report and compare the results to documented experiences from other countries; (ii) to develop a methodological framework for a phase II study, which would consider the critical issues that need to be ad-

1. See WORLD COMMISSION ON DAMS, DAMS AND DEVELOPMENT: A NEW FRAMEWORK FOR DECISION-MAKING (The Report of the World Commission on Dams) at xxx (Earthscan 2000) [hereinafter WCD REPORT]; see also World Commission on Dams, *Dams & Development* (June 6, 2001) available at <http://www.dams.org/> (explaining the purpose and objectives of the organization).

2. See OED Precip Number 125, World Bank Lending for Large Dams: A Preliminary Review of Impacts, September 1996 (summarizing an internal Bank Report prepared by OED entitled *The World Bank's Experience with Large Dams – A Preliminary Review of Impacts*, Profile of Large Dams (Background Documents, August 15, 1996).

dressed in determining the future development of a large dam; (iii) to propose a rigorous and transparent process for defining the scope, objectives, organization, and financing of the follow up work, including the Phase II study; and (iv) to identify follow-up actions necessary for the development of generally accepted standards for assessment, planning, building, operating, and financing of large dams that would adequately reflect lessons learnt from past experience.³ The four overview papers presented and discussed at the Gland Workshop dealt with engineering and economic aspects, social impacts, environmental impacts, and future challenges facing the hydropower industry.⁴ Like the OED Report, the issues of dams built on international rivers and the riparian states' rights and duties thereon, were not among the issues addressed during the Gland Workshop. The major outcome of the Gland Workshop was an agreement to establish a two-year World Commission on Dams (the "Commission") by November 1997.⁵ The objectives of the Commission, as they were developed and refined, were: (i) to review the development effectiveness of large dams⁶ and assess alternatives for

3. See *Large Dams: Learning From the Past, Looking at the Future*, (Tony Dorsey, ed.), Workshop Proceedings, Gland, Switzerland, at 5-6, July 1997 [hereinafter Gland Workshop Proceedings] (noting that the thirty-nine participants that were invited to the Gland Workshop included "seven from the World Bank, six from Government agencies, seven from local NGOs (two of whom were unable to come in the last minute), five from IUCN, eight from private dam construction and consulting companies and industry organizations, and four from academia/research."); see *id.* at 7 (explaining that 37 participants actually attended the Gland Workshop).

4. See Gland Workshop Proceedings, *supra* note 3, at 6-7.

5. See *id.* at 9 (pointing out that the Commission was formally announced in Washington DC in February 1998, and began its work in May 1998); see also World Commission on Dams, Interim Report, 1, 4 (July 1999) (noting the Interim Report indicated there were 13 members of the Commission, whereas, the Report of the World Commission on Dams indicates there are 12 members of the Commission); *id.* at 4 (explaining that Ms. Shen Guoyi (People's Republic of China) was no longer included in the list of the Commissioners in the WCD REPORT).

6. See WCD REPORT, *supra* note 1, at 11 (explaining that the International Commission on Large Dams (ICOLD) defines a large dam as (i) a dam with a height of fifteen meters or more from the foundation, and (ii) a dam with a height of five to fifteen meters and has a reservoir volume of more than three million cubic meters). Based on this definition, the Commission concluded that there are currently more than 45,000 large dams around the world. See *id.*

water resources and energy development, and (ii) to develop internationally acceptable criteria, guidelines, and standards where appropriate, for the planning, design, appraisal, construction, operation, monitoring, and decommissioning of dams.⁷

Unlike the OED Report or the Gland Workshop, the work of the Commission was extensive and elaborate, and addressed technical, economic, financial, and environmental aspects, as well as the rights and obligations of riparian states over the shared rivers where the dams are built.⁸ Indeed, the Commission covered the issue of international rivers by including as one of its seven strategic priorities “sharing rivers for peace, development and security.”⁹ The Commission also established a number of policy principles and recommendations regarding the building of dams on shared rivers.¹⁰ The pur-

7. See WCD REPORT, *supra* note 1, at 28 (stating that the objectives are more focused than the terms of reference originally agreed to at the Gland Workshop, which were (i) to assess the experience with existing, new and proposed large dam projects so as to improve current practices and social and environmental conditions; (ii) to develop decision-making criteria, and policy and regulatory frameworks for assessing alternatives for energy and water resources development; (iii) to evaluate the development effectiveness of large dams; (iv) to develop and promote internationally acceptable standards for the planning, assessment, design, construction, operation and monitoring of large dam projects and, if the dams are built, ensure affected peoples are better off; (v) to identify the implications for institutional, policy and financial arrangements so that benefits, costs and risks are equitably shared at the global, national and local levels; and (vi) to recommend interim modifications – where necessary – of existing policies and guidelines, and promote “best practices”); see also Gland Workshop Proceedings, *supra* note 3, at 9-10 (providing the original terms of reference for the Commission). Although the Gland terms of reference may seem broader than the two objectives of the Commission specified in the text above, the main elements from the Gland terms of reference are covered in the Commission’s objectives. Indeed, the Commission broadened the Gland terms of reference by including items like decommissioning dams.

8. See WCD REPORT, *supra* note 1, at 2.

9. See WCD REPORT, *supra* note 1, ch. 8 (discussing the strategic priorities); see also *infra*, Part II.

10. See Revised Protocol on Shared Watercourses in the Southern African Development Community (SADC), Aug. 7, 2000, 40 I.L.M. 317 (2001) [hereinafter SADC Protocol on Shared Watercourses] (using the term “shared rivers”); see also WCD REPORT, *supra* note 1, at 257 (noting that the Commission used the term “shared rivers,” and, less often, the term “transboundary rivers,” instead of the widely used term “international rivers.”). This article uses these three terms synonymously.

pose of this article is to review and analyze how the Commission addressed the issue of shared rivers, and compare the policy principles and recommendations with the principles of contemporary international water law as enunciated in the United Nations Convention on the Law of the Non-Navigational Uses of International Watercourses (the "UN Convention").¹¹

I. THE COMMISSION'S METHODOLOGY AND KNOWLEDGE BASE

Before delving into the principles and recommendations enunciated by the Commission with regard to shared rivers, it may be useful to discuss briefly the methodology followed by the Commission and the knowledge base for its findings and recommendations as far as they relate to the discussion of shared rivers. The Commission indicated at the outset that improving development outcomes requires an expanded basis for decision-making that reflects full knowledge of benefits, impacts, and risks with regard to water and energy.¹² Such an expanded basis for decision-making also requires "introducing new voices, perspectives and criteria into decision-making, as well as processes that will build consensus around the decisions reached."¹³ The Commission identified five core values which illustrate its understanding of those issues: equity, efficiency, participatory decision-making, sustainability, and accountability.¹⁴ These core values are a fundamental part of the Report. Furthermore, the Commission linked those values to "a globally accepted framework for setting universal goals, norms and standards."¹⁵ The Commission identified the United Nations Charter (1945) and the Universal Dec-

11. See UN Convention on the Law of the Non-navigational Uses of International Watercourses, *opened for signature* May 21, 1997, 36 I.L.M. 700 (1997) [hereinafter UN Convention].

12. See WCD REPORT *supra* note 1, ch. 6 (discussing the decision-making structure used by the Commission).

13. See *id.* at xxxii (noting what will be done to increase the information basis for the decision-making process).

14. See *id.* at 23 (setting forth the values of the Commission).

15. See *id.* at xxxiii.

laration of Human Rights (1948) as the foundation for the framework. The United Nations Declaration on the Right to Development (1986) and the Rio Declaration on Environment and Development (1992) also provide support for the framework utilized by the Commission. The “core values” and the aforementioned international agreements are complementary because they “cover a broad spectrum [of issues] ranging from human rights, through social development and environment, to economic cooperation.”¹⁶

Indeed, the discussion by the Commission on the issue of shared rivers centers around the need for cooperation between riparian states¹⁷ in sharing the waters and other benefits derived therefrom. The Commission’s Report elaborates on this concept by saying:

As specific interventions for diverting water, dams require constructive co-operation. Consequently, the use and management of resources increasingly becomes the subject of agreement between States to promote mutual self-interest for regional co-operation and peaceful collaboration. This leads to a shift in focus from the narrow approach of allocating a finite resource to the sharing of rivers and their associated benefits in which states are innovative in defining the scope of issues for discussion.¹⁸

The Commission based its Report on a large variety of sources. These sources included eight in-depth case studies of large dams,

16. *See id.* at 200-02 (highlighting the elements of each of the instruments); *Id.* at 284-85 (discussing the precautionary approach). The WCD Report attributed the date 1947 to the Universal Declaration of Human Rights, but this is clearly a typographical error since the Declaration was adopted by the General Assembly of the United Nations on December 10, 1948. *See generally*, DAVID CUSHMAN COYLE, *THE UNITED NATIONS AND HOW IT WORKS* 63 (1963).

17. *See* WCD REPORT, *supra* note 1, at 257 (defining the term riparian state “to mean any State through which a transboundary river flows or forms part of its boundary, or which includes part of the catchment area of a transboundary river”). This is a wider definition than the generally agreed upon definition as it renders a state riparian because it includes part of the catchment area. *See* UN Convention, *supra* note 11, art. 2(a) (defining the term “watercourse” to mean “a system of surface waters and ground waters constituting by virtue of their physical relationship a unitary whole and normally flowing into a common terminus); *see also* UN Convention, *supra* note 11, art. 2(b) (defining the term “international watercourse” as “a watercourse where parts of which are situated in different states”).

18. *See* WCD REPORT, *supra* note 1, at xxxv.

country studies for large dams in India and China, a briefing paper on dams in Russia and the Commonwealth of Independent States, a cross-check survey for 125 existing dams in 52 countries, seventeen thematic review papers, four regional consultations,¹⁹ and more than 900 submissions from interested individuals, groups, and institutions.²⁰ Five of the eight case studies pertained to international rivers.²¹ Those rivers are the Columbia River for the Grand Coulee Dam, the Zambezi River for the Kariba Dam, the Orange River for the Gariiep and Vanderkloof Dams, the Indus River for the Tarbela Dam, and the Mekong River for the Pak Mun Dam.²² One of the seventeen thematic reviews dealt with "River basins – institutional frameworks and management options," and included ten papers covering a wide range of topics.²³

The five international rivers included as part of the eight case studies are quite varied with regard to the number of riparian countries, the presence of some form of cooperative arrangements over the basin, and whether such arrangements have been concluded by all or some of the riparian countries.²⁴ As will be discussed later, the Commission's Report, unfortunately, did not address those issues as comprehensively as it did with the environmental, social, economic, and financial issues. Indeed, the recommendations of the Commission are based solely on its findings in the environmental, social, and financial areas. The recommendations of the Commission regarding shared rivers are not linked to its findings in this area because no findings regarding shared rivers are discussed.

19. See WCD REPORT, *supra* note 1, at xxv (outlining the four regional consultations that took place in Colombo, Sri Lanka for South Asia; Hanoi, Vietnam for East and South-East Asia; Sao Paulo, Brazil for the Americas; and Cairo, Egypt for Africa and the Middle East).

20. See *id.* at xxx.

21. See *id.* at 30-31.

22. See *id.* (discussing the case studies that dealt with dams built. The dams built on national rivers are the Tocantins River in Brazil for the Rucuru Dam, the Ceyhan River in Turkey for the Aslantas Dam, and the Glomma and Laagen Basin for some 40 dams in Norway).

23. See *id.* at 366 (listing papers for this thematic review).

24. See WCD REPORT, *supra* note 1, at 38.

II. THE COMMISSION'S RECOMMENDATIONS

Part two of the Commission's Report is entitled "The Way Forward."²⁵ Chapter 8 lays down seven strategic priorities for guiding decision-making with regard to dams. Those strategic priorities are: (i) gaining public acceptance; (ii) comprehensive options assessment; (iii) addressing existing dams; (iv) sustaining rivers and livelihoods; (v) recognizing entitlements and sharing benefits; (vi) ensuring compliance; and (vii) sharing rivers for peace, development, and security.²⁶ Each priority includes a set of recommended principles, which in the Commission's view "if applied, will lead to more equitable and sustainable outcomes in the future."²⁷

The Commission's discussion of the strategic priority for shared rivers started by noting the presence of "261 watersheds that cross the political boundaries of two or more countries. These basins cover about 45% of the earth's land surface, account for about 80% of global river flow and affect about 40% of the world's population."²⁸ The Commission further noted that most of those basins do not have agreements governing allocation of their waters,²⁹ and underscored

25. *See id.* at 288.

26. *See id.* ch.8 (laying out the strategic priorities of the Commission in making future recommendations).

27. *See* WCD REPORT, *supra* note 1, at 195 (including 26 recommendations under the seven strategic priorities); *id.* at 278 (indicating Commission's intent that the recommendations become guidelines for implementing "good practice[s]"); *id.* ch. 9 (discussing the guidelines in detail).

28. *See* WCD REPORT, *supra* note 1, at 15-16. (indicating that the term "rivers" is used as a general term, and that "the strategic priority and policy principles relate equally to all types of waters which are or might be impacted by dams."); *see also* WILLIAM COSGROVE & FRANK RUSBERMAN, WORLD WATER VISION, MAKING WATER EVERYBODY'S BUSINESS, 43 (2000) (explaining that the World Water Council, estimates the number of international river basins as "close to 300"). Authors in this field have used different methodologies for identifying international rivers, which has resulted in varying numbers. *See* PETER GLEICK, THE WORLD'S WATER 2000-2001, THE BIENNIAL REPORT ON FRESHWATER RESOURCES 219 (2000).

29. *See* WCD REPORT, *supra* note 1, at 174 (noting that "since 805 AD approximately 3,600 water related treaties were signed between nations"). A majority of the treaties relate to navigation and national boundaries, while close to 300 are non-navigational and cover issues related to water quantity, water quality and hydropower. *See id.* Many of these treaties are narrow in scope and do not extend

the absence of an overarching globally binding instrument on international rivers, since the UN Convention has not yet entered into force and effect.³⁰ The Commission recommended the following five principles with regard to the strategic priority for shared rivers:

A. BASIN AGREEMENTS ON SHARED RIVERS

The Commission's first policy principle recommended that national water policies and legislation should make specific provision for basin agreements on shared river basins.³¹ The rationale behind this recommendation is to provide a clear statement of the riparian states' intention to cooperate over shared rivers, and to set out the basic principles to be embodied in future agreements. South Africa adopted this approach in their National Water Act by including references to such international agreements.³² Such provisions, the Com-

principles for integrated resource management throughout the basin. *See id.*

30. *See* G.A. Res. 2669, U.N. GAOR, 25th Sess. (1970) (asking the International Law Commission (ILC) to study the topic of international watercourses). The ILC started work on the draft Convention at its twenty-third session in 1971, completed its work, adopted the articles of the draft Convention and recommended the draft articles to the General Assembly on June 24, 1994. *See* 2 Y.B. INT'L L. COMM'N, Part two, 88 (1997). The Convention was adopted by the General Assembly on May 21, 1997 by a vote of 103-3 (Burundi, China and Turkey voted against the Convention) with 27 abstentions. *See* UN Convention, *supra* note 11. When the WCD Report was issued on November 16, 2000, sixteen countries had signed the Convention, and eight countries had ratified it. *See* UN Convention, *supra* note 11, art. 35 (explaining that thirty-five instruments of ratification are necessary for the Convention to enter into force and effect).

31. *See* WCD REPORT, *supra* note 1, at 251-56.

32. *See* §2 of Republic of South Africa National Water Act, Act 36 of 1998 (specifying the purpose of the Act is "to ensure that the nation's water resources are protected, used, developed, conserved, managed and controlled in ways which take into account amongst other factors (a) . . . (b) . . . (i) meeting international obligations."); *id.* ch. 10 (authorizing the Minister of Water Affairs and Forestry "to establish bodies to implement international agreements," which address management and development of shared water resources, and provide for increased regional cooperation). The concept of the "Reserve" is a domestic, legislative mechanism "to give effect to South Africa's international obligations for the protection and preservation of the ecosystems of international watercourses and for the sustainable development and equitable utilization of those watercourses."). *See* Robyn Stein, *South Africa's New Democratic Water Legislation: National Government's Role as Public Trustee in Dam Building and Management Activities*, 18 J. ENERGY NAT. RESOURCES & ENVTL. L. 284 (2000).

mission believes, would also provide the basis for more integrated management agreements for the shared rivers. Those agreements would, in turn, prompt the riparian states to “adopt a progressive approach to institutional development, starting with exchange of information, joint scientific teams to analyse data, and joint arrangements for monitoring the implementation of agreements.”³³

The Commission continued its discussion of the UN Convention under the first principle, and went on to recommend that “States should make every effort to ratify the Convention and bring it into force.”³⁴ If there are obstacles to endorsing the UN Convention, the Commission recommends that some key elements of the Convention could still be used for further dialogue between the riparian states. Those elements are the principle of equitable and reasonable utilization, the obligation not to cause significant harm, and the need to notify other riparian states of planned measures that may have significant effect on them.³⁵

Despite its overall fair comprehension of the principles of international water law, the Commission, unfortunately, seems to have accepted the misconception that there is a conflict between the principle of equitable and reasonable utilization on the one hand, and the obligation to not cause significant harm on the other.³⁶ In this regard, the Commission, referring to those two principles, stated:

The meaning of these terms is still evolving. Particularly, the application of the principle of ‘no significant harm’ will often conflict at a basin

33. See WCD REPORT, *supra* note 1, at 253.

34. See *id.* (mentioning that the Commission referred more than eight times in its Report to the UN Convention). This clearly underscores the importance the Commission has attached to the UN Convention.

35. See *id.* at 253.

36. See WCD REPORT, *supra* note 1, at 366 (noting only one of the 17 thematic reviews, which formed the basis for the Report’s strategic priorities on shared rivers, addressed “River Basins – Institutional frameworks and management options”). Unfortunately, none of the authors of those papers is an international water lawyer, and this must have contributed to some of the misconceptions about international water law. One must, however, hasten to add that the Chairman of the Commission, Professor Kader Asmal, is a prominent lawyer in a number of fields including human rights and water law. The emphasis given to human rights and water law in the WCD Report is, no doubt, attributable to his chairmanship of the Commission.

level with many applications of the principle of 'equitable and reasonable utilization.' These interactions have not fully been resolved legally or customarily, suggesting that in their application, these principles should be read alongside the Commission's strategic priorities when planning future water resources and hydro-power developments.³⁷

A careful reading of the UN Convention should, however, reveal that there is actually no conflict between the principle of "equitable and reasonable utilization," and the "obligation [to] not cause significant harm." Article 6 of the UN Convention enumerates a number of factors for determining what is equitable and reasonable utilization. Those factors include, "the effects of the use or uses of the watercourse in one watercourse State on other watercourse States" and "existing and potential uses of the watercourse."³⁸ At the same time, those factors will have to be used, together with any others, to determine if any significant harm is caused to another riparian state.

Moreover, Article 7(1) of the UN Convention obliges watercourse states, when utilizing an international watercourse in their territory, to take all appropriate measures to prevent significant harm to other watercourse states.³⁹ When significant harm nevertheless is caused to another watercourse state, then Article 7(2) of the UN Convention obliges the state causing the harm to "take all appropriate measures, having due regard to Articles 5 and 6, in consultation with the affected State, to eliminate or mitigate such harm and, where appropriate, to discuss the question of compensation."⁴⁰ Articles 5 and 6 of the UN Convention address the issues of equitable and reasonable utilization. Article 7(2) requires giving due regard to the principle of equitable and reasonable utilization when significant harm has nevertheless been caused to another watercourse state. The Article also indicates that the causing of harm may be tolerated in certain cases, such as when the possibility of compensation may be considered.

37. See WCD REPORT, *supra* note 1, at 253.

38. See UN Convention, *supra* note 11, art. 6 (listing other factors, relevant to equitable and reasonable utilization, including "social and economic needs of watercourse States;" availability of alternatives to a planned use; and population dependent on watercourse in each State).

39. See UN Convention, *supra* note 11, art. 7(1).

40. See *id.* art. 7(2).

This overview of Articles 5, 6, and 7 of the UN Convention indicates that the obligation not to cause significant harm has clearly been subordinated to the principle of equitable and reasonable utilization. Since those elements of the UN Convention reflect customary international law, there is no conflict between the principle of equitable and reasonable utilization, and the obligation not to cause significant harm.⁴¹

The endorsement of the UN Convention by the Commission is certainly a commendable step and in line with other similar endorsements.⁴² Despite the slow process of signing and ratifying the

41. See Stephen McCaffrey, *The UN Convention on the Law of the Non-Navigational Uses of International Watercourses: Prospects and Pitfalls*, in INTERNATIONAL WATERCOURSES – ENHANCING COOPERATION AND MANAGING CONFLICT (Salman M. A. Salman and Laurence Boisson de Chazournes, eds.) World Bank Technical Paper No. 414, at 22 (1998) (discussing the subordination of the obligation not to cause significant harm to the principle of equitable and reasonable utilization) [hereinafter *International Watercourses*]; see also *Gabcikovo-Nagymaros*, *infra* note 42 (adding that the International Court of Justice in the *Gabcikovo-Nagymaros* case referred to the principle of reasonable and equitable utilization, and made no reference to the obligation not cause harm).

42. See *Gabcikovo-Nagymaros Case* (Hung. v. Slov.), 1997 I.C.J. No. 92 (Sept. 25) reprinted in 37 I.L.M. 162 (1997) [hereinafter *Gabcikovo-Nagymaros*] (explaining that the Court issued its judgment in September 1997, which was four months after the Convention was adopted by the United Nations General Assembly); *id.* at para. 8 (stating that the adoption of the Convention strengthened the principle of community of interest for non-navigational uses of international watercourses). See generally UN Convention, *supra* note 11, at para. 147 (explaining the right of watercourse states to participate in the use, development and protection of the international watercourse in an equitable and reasonable manner, and the duty of such a state to cooperate in the protection and development of such a watercourse). Moreover, the Court emphasized the importance of “the multi-purpose program, in the form of a coordinated single unit, for the use, development and protection of the watercourse is implemented in an equitable and reasonable manner.” See *Gabcikovo-Nagymaros*, *supra*, at para. 150; see also GLOBAL WATER PARTNERSHIP, TOWARDS WATER SECURITY: A FRAMEWORK FOR ACTION 32 (2000) (concluding that the basis for consensus in the management of shared waters would be strengthened by the reactivation and follow-up of the currently stalled work of the United Nations Convention on Non-Navigable (*sic*) Uses of International Watercourses); Green Cross International, *National Sovereignty and International Watercourses*, 60 (Mar. 2000) (stating a clear endorsement of the UN Convention by the Sovereignty Panel of the World Commission on Water for the 21st Century when it proposed “the ratification of the UN Convention on the Law of the Non-Navigational Uses of International Watercourses.”). The Sovereignty Panel added that “This would not only contribute to the universal application of the

Convention, it is generally agreed that the key elements of the Convention identified above reflect customary international water law principles.⁴³ It is unlikely, however, that the Commission's recommendation that national water policies and legislation make a specific reference to basin agreements will gain wide acceptance. Agreements on shared rivers are negotiated and concluded as a result of many factors, the most important of which is the political will of the riparian states to cooperate. The presence or absence of a reference to the basin agreements in the national legislation is unlikely to influence such a political will.

B. ALLOCATION OF BENEFITS, NOT JUST WATER

The Commission noted that the competing demands on the waters of some of the shared rivers often exceed the available supply, and as such may result in disputes over allocation between the riparian states.⁴⁴ Hence, the Commission recommends shifting from a primary focus on the allocation of water, to a wider focus on sharing the benefits derived from the use of water.⁴⁵ The comparative advantages of each of the riparian states, derived from differences in topography, climate, or other resource endowment, could be used effectively to generate synergies. For example, one riparian state may be better endowed to use the shared river for power generation, whereas another riparian state may have better soil, climate, and infrastructure for irrigation. This optimization of the use of the shared river results in wider benefits shared by all the riparian states.

The approach of shifting the focus to benefits, rather than just concentrating on sharing the waters of the shared river, is not new. The United States and Canada entered into lengthy negotiations that re-

principles of equitable utilization and the obligation not to cause significant harm, but would be a gesture of good will and indicate a high level of dedication to resolving the question of international watercourses." *Id.*

43. See Stephen McCaffrey, *supra* note 41, at 26.

44. See WCD REPORT, *supra* note 1, ch. 5 (addressing the demands placed on waterways and the disputes that arise when waterways are shared).

45. See *id.* at 251 (explaining that this approach is reflected in the title of the seventh strategic priority entitled "Sharing rivers for peace, development and security," and not sharing the waters of the rivers).

sulted in the 1961 Treaty on the issue for sharing benefits generated by the waters of the Columbia River.⁴⁶ Similarly, India and Nepal, on February 12, 1996, concluded a treaty on the Mahakali river with a view of setting forth the foundation for an integrated development approach to water use between them.⁴⁷ The UN Convention itself makes a number of references to the notion of “shared benefits,” as well as to the principle of “optimal and sustainable utilization.”⁴⁸ In-

46. The 1909 Treaty between the United States and Great Britain Relating to the Boundary Waters between the United States and Canada established the International Joint Commission (IJC), which was entrusted with reviewing projects that would affect the flow of boundary waters. See TREATIES AND OTHER INTERNATIONAL AGREEMENTS OF THE UNITED STATES OF AMERICA 1776-1949, 319 (compiled by Charles Bevans, 1972). The IJC studied the issues of developing hydropower and flood control facilities on the Columbia River and made its recommendations in 1959. The study included recommendations on sharing the net benefits between the two countries. These recommendations formed the basis for negotiation of “The Treaty between Canada and the United States Relating to Cooperative Development of the Water Resources of the Columbia River Basin” in 1961. See Treaty on Cooperative Development of the Water Resources of the Columbia River Basin, Jan.-Sept. 1964, U.S.-Can., 592 UNTS 272; see also Exchange of Notes, 3 ILM 318 (1964). See generally Charles Bourne, *The Columbia River Controversy*, in INTERNATIONAL WATER LAW, SELECTED WRITINGS OF PROFESSOR CHARLES B. BOURNE 321 (Patricia Wouters, Ed., 1997) (discussing the treaty between Canada and United States); Ralph W. Johnson, *The Columbia Basin*, in THE LAW OF INTERNATIONAL DRAINAGE BASINS 167 (Garretson et al, Eds., 1967) (providing background on Columbia River dispute and explaining legal, political, and economic factors important to resolving issue). The Commission misstated the date of the last treaty regarding the Columbia River Basin between the United States and Canada as 1968. The correct date is 1961. Compare WCD REPORT, *supra* note 1, 175; with, Treaties in Force, List of Treaties and Other International Agreements of the United States in Force on January 1, 2000, 39-40 (Compiled by the Treaty Affairs Staff, Office of the Legal Adviser, Department of State).

47. See Treaty Concerning Integrated Development of Mahakali River, Feb. 12, 1996, India-Nepal, 36 I.L.M. 531 [hereinafter Mahakali Treaty]; see also Salman M. A. Salman and Kishor Uprety, *Hydro-Politics in South Asia: A Comparative Analysis of Mahakali and the Ganges Treaties*, 39 NAT. RESOURCES J. 295 (1999).

48. See UN Convention, *supra* note 11, art. 5(1) (stating that “[i]n particular, an international watercourse shall be used and developed by watercourse States with a view to attaining optimal and sustainable utilization thereof and benefits therefrom.”); *id.* art. 8 (stating 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.”). See generally UN Convention, *supra* note 11, preamble (using language

deed, a number of initiatives on some of the shared rivers, such as the Nile Basin Initiative, emphasize the sharing of benefits, not just the allocation of waters.⁴⁹ As such, the Commission's Report has highlighted this notion of the allocation of benefits, and provided a more public forum for debate on the most optimal ways of achieving such an allocation.

C. NOTIFICATION, REPLY, AND DISPUTE SETTLEMENT

The Commission, in the first recommendation on shared rivers, included the requirement to notify other riparian states of the plan to build a dam on the shared river, if such states may suffer significant harm as a result of the building of such a dam.⁵⁰ The third recommendation of the Commission dealt with the procedures that a riparian state should follow and the rights and obligations of the state that may suffer significant harm if another riparian state continues with plans to build a dam.⁵¹ The recommendation states that dams on shared rivers should not be built if one of the riparian states raises an objection that is upheld by an independent panel.⁵²

The Commission provided detailed procedures for notification.⁵³ The first notification is to take place at the early stage of planning, as part of the strategic impact assessment.⁵⁴ The notifying state should allow potentially affected riparian states at least three months to

to connote the belief that benefits are to be shared beyond just that of water).

49. See Nile Basin Initiative Secretariat, *The Nile Basin Initiative - Preparatory Phase Working Documents*, Report No. 01, Entebbe, June 1999, at 1 (explaining that the objectives of the Nile Basin Initiative include developing the water resources of the Nile Basin "in a sustainable and equitable way to ensure prosperity, security and peace for all its peoples," ensuring "efficient water management and the optimal use of the resources," and ensuring "cooperation and joint action between the riparian countries, seeking win-win gains.").

50. See WCD REPORT, *supra* note 1, at 253 (explaining that the first policy principle includes prior information to other riparian states on plans that may significantly affect them).

51. See *id.* at 254 (outlining the necessary steps to ensure good faith negotiation among riparian states in planning to build a dam on a shared river).

52. *Id.*

53. See *id.* at 306 (describing the procedures on prior notification for shared rivers).

54. *Id.*

identify relevant issues to be addressed at the subsequent preparatory stage.⁵⁵ The notified states should respond within those three months.⁵⁶ The second notification should take place prior to selecting a location on a shared river, and the notifying state should supply other affected riparian states with adequate technical information about the proposed project and the results of any impact assessment. The notified states should respond within six months of the notification.⁵⁷ In case any of the notified states fail to respond within the specified time, the notifying state could proceed with the planning and construction subject to its observance of the relevant international law principles and the Commission's strategic priorities and policy principles.⁵⁸ In case a state fails to notify another potentially affected riparian state of the project, the latter should be able to request and receive information on the dam and to make its views known.⁵⁹ If the affected state is denied an opportunity to express its views on the project, the Commission recommends that remedies be sought through the International Court of Justice.⁶⁰ If the notified state objects to the dam, then the matter should be referred to an independent panel.⁶¹ The dam should not be built if the panel upholds the objection. Further, if the dispute persists, it should be referred to the International Court of Justice.⁶²

Although these recommendations may seem far-reaching, they are, by and large, in line with the principles of international water law in this area, as enunciated by the UN Convention. Indeed, Part III of the UN Convention, which deals with "planned measures" is the longest

55. See WCD REPORT, *supra* note 1, at 306.

56. *Id.*

57. *Id.*

58. *Id.*

59. See *id.* (quoting the procedure outlined in the report).

60. See *id.* (explaining the procedures to safeguard the rights of potentially affected riparian states).

61. See WCD REPORT, *supra* note 1, at 254 (stating that if the parties fail to reach an agreement after the six-month notification period, an independent panel should be created under the UN Convention).

62. See *id.* (recommending the use of the International Court of Justice as a last resort if the parties fail to resolve disputed through an independent panel).

part of the Convention and consists of nine articles.⁶³ These articles oblige the state planning a measure that may have a significant adverse effect upon other riparian states to provide such states with timely notification, accompanied by available technical data and related information, and to allow six months for response.⁶⁴ Although

63. See UN Convention, *supra* note 11, arts. 11-19 (dealing with planned measures); see also UN Convention, *supra* note 11, arts. 30, 33 (addressing the issues of "Indirect Procedures" and "Settlement of Disputes"). In the case of Article 30, some of the riparian countries may not have a diplomatic relationship with other riparian states, or the relationship between them may not be conducive to discussion of such issues. Consequently, notification may have to be affected through indirect procedures. In the case of Article 33, the matter may not be resolved through negotiations; thus, the procedures for dispute settlement may have to be invoked.

64. See UN Convention, *supra* note 11, arts. 11-19 (explaining applicable procedures to encourage cooperation between riparian states when "planned measures" may adversely affect other riparian states). Notification is also addressed in the work of the Institute of International Law, particularly in what is commonly known as Salzburg Resolution of 1961, *Utilization of Non-Maritime International Waters (Except for Navigation)*, reprinted in, 56 AM. J. INT'L L. 737 (1962) [hereinafter the Salzburg Resolution]. Under Article 5 of the Salzburg Resolution, works or utilization that may have serious effects on the possibility of utilization of the same waters by other states may not be undertaken except after prior notice to the interested states. See Salzburg Resolution, *supra*, art. 5. Under Article 6, if an objection is made, the states will enter into negotiations with the intention of reaching an agreement within a reasonable time. See Salzburg Resolution, *supra*, art. 6. The International Law Association has provided further commentary on the issue of notification, through the Helsinki Rules. See INTERNATIONAL LAW ASSOCIATION, *The Helsinki Rules* art. 29(2)-(4), REPORT OF THE FIFTY-SECOND CONFERENCE HELD AT HELSINKI 484, 518-19 (1966) [hereinafter Helsinki Rules]. The Helsinki Rules address the issue of notification in Chapter 6, "Procedures for the Prevention and Settlement of Disputes." See the Helsinki Rules, *supra*, at 516. Article 29 requires a state, regardless of its location in a drainage basin, to "furnish to any other basin State, the interest of which may be substantially affected, notice of any proposed construction or installation which would alter the regime of the basin." See Helsinki Rules, *supra*, art. 29(2), at 518. The notifying state should afford the notified states a reasonable period of time to assess the probable effects of the planned construction. See Helsinki Rules, *supra*, art. 29(3), at 519. If a dispute arises, then the Helsinki Rules require the parties to seek a solution through negotiations, use of a joint agency, mediation of a third state, commission of inquiry, or referral to the International Court of Justice. See the Helsinki Rules, *supra*, art. 30-34, at 522-29. The annex to the Helsinki Rules includes the "Model Rules for the Constitution of the Conciliation Commission for the Settlement of a Dispute." See Helsinki Rules, *supra*, Annex, at 531-32. See also BOURNE, *supra* note 46, at 249 (describing the International Law Association's contribution to International Water Resources Law). See generally, Article 3(2) of the United Nations Declaration on

the UN Convention provides for a one-stage notification process, it does allow the six month period to be extended at the request of the notified state for a period of six more months. The absence of a reply to notification gives the notifying state the right to proceed with the planned measure subject to its obligations under articles 5 and 7 of the Convention.⁶⁵ The Convention also provides a watercourse state that has reason to believe another watercourse state is planning measures that may cause significant adverse effects, with the right to request the other state to apply the notification provisions.⁶⁶

When disputes between the notifying and notified states cannot be resolved through consultations and negotiations, the Commission recommended establishing an independent panel. The Commission stated that, “[t]he creation and operation of such a panel is defined in the 1997 UN Convention on the Law of the Non-Navigational Uses of International Watercourses.”⁶⁷ Article 33 of the UN Convention deals with dispute settlement, and paragraph two of this Article lays down a number of mechanisms for settlement of disputes.⁶⁸ If the parties concerned fail to resolve their dispute through negotiations or any other means referred to in paragraph two, then the dispute shall be submitted at the request of any disputing party to a fact-finding commission.⁶⁹ Such a fact-finding commission is to consist of three

the Right to Development adopted by the General Assembly on December 4, 1986, which states that “[t]he realization of the right to development requires full respect for the principles of international law concerning friendly relations and co-operation among States in accordance with the Charter of the United Nations.” G.A. Res. 128, U.N. GAOR, 41st Sess., Supp. No.53, at 186, U.N. Doc. A/RES/41/128 (1987).

65. See UN Convention, *supra* note 11, art. 5 (discussing “equitable and reasonable utilization and participation”); *id.* art. 7 (addressing “obligations not to cause significant harm”).

66. See UN Convention, *supra* note 11, art. 18 (providing procedures in the absence of notification).

67. See WCD REPORT, *supra* note 1, at 254.

68. See UN Convention, *supra* note 11, art. 33(2) (explaining that if parties cannot reach agreement by negotiations they may (1) utilize the good offices of or request mediation by a third party; or (2) use any joint watercourse institutions that may have been established or (3) agree to submit their dispute to an arbitration panel or the ICJ).

69. See *id.* art. 33 (3) (discussing the procedure of dispute resolution if the dispute persists after six months from the time when a party requested negotiation).

members, one member appointed by each of the parties concerned, and the third member, who shall be the chairman, to be selected by the two members already nominated.⁷⁰ In case the two members fail to agree on a chairman within three months of the request to establish the fact-finding commission, any party concerned may request the Secretary-General of the United Nations to appoint the chairman.⁷¹ One of the parties may also call upon the Secretary-General to appoint a person as the arbiter if the other party fails to nominate its member within three months of the initial request, and the person so appointed shall constitute a single-member commission. The fact-finding commission has the right to determine its own procedure. Further, the parties concerned are obliged to provide the fact-finding commission with such information as it may require, which includes providing access to their respective territory and to any facilities relevant for the purpose of its inquiry. The fact-finding commission shall adopt its report by a majority vote, unless it is a single member commission, “and shall submit the report to the parties concerned setting forth its findings and the reasons therefor and such recommendations as it deems appropriate for an equitable solution of the dispute, which the parties concerned shall consider in good faith.”⁷²

In addition to the dispute resolution mechanisms described above, the UN Convention provides for alternative methods of dispute resolution. Any party to the Convention may submit any dispute not resolved through the above-mentioned process to the International Court of Justice and/or an arbitral tribunal established and operating in accordance with the procedure outlined in the Annex to the UN Convention.⁷³ The submitting party must declare in writing that it recognizes the dispute settlement procedure “as compulsory *ipso facto* and without special agreement in relation to any party accept-

70. See *id.* art. 33(4) (explaining process for establishing a fact-finding committee).

71. See UN Convention, *supra* note 11, art. 33 (5) (clarifying that the Secretary-General of the United Nations must appoint a person who is not the nationality of any of the parties to the dispute or of any riparian state of the watercourse concerned).

72. See UN Convention, *supra* note 11, art. 33 (8).

73. See UN Convention, *supra* note 11, art. 33 (10).

ing the same obligation.”⁷⁴

The Annex to the UN Convention gives detailed procedures on arbitration including composition of the tribunal, rules of procedure, interim measures, obligations of the parties to provide all relevant documents, information and facilities, and the cost and duration of the tribunal. Article 14(3) of the Annex states that the award shall be binding on the parties and shall be without an appeal unless the parties have agreed in advance to an appellate procedure.⁷⁵

Thus, the Commission has opted for the fact-finding procedures under the UN Convention since the parties are only required to consider the findings in good faith, rather than the arbitration procedures under which the decision is binding and, generally, final. To address the lack of a final and binding decision under the fact-finding procedure, the Commission recommends the parties refer the dispute to the International Court of Justice, if the dispute remains and the parties do not have recourse to dispute resolution through international, regional, or bilateral agreements.⁷⁶

The World Bank has adopted detailed policies and procedures for dealing with projects on international waterways.⁷⁷ Indeed, the World

74. *See id.* (explaining that the declaration in writing should be submitted to the Depository for the Secretary-General of the United Nations either at the time of ratification, acceptance, approval or accession to the UN Convention, or any time thereafter).

75. It should be noted that Article 14(4) of the Annex gives either party to the dispute the right to submit to the arbitral tribunal that rendered the decision any controversy that may arise regarding the interpretation or manner of implementation of such a decision. *See* UN Convention, *supra* note 11, art. 14(3).

76. *See* WCD REPORT, *supra* note 1, at 254 (describing the procedure for referring the dispute to the ICJ, which would be “either by mutual agreement, or directly if both parties have previously submitted to the compulsory jurisdiction of the ICJ by declaration under Article 36 of the Statute of the Court”).

77. *See World Bank Operational Policies 7.50: Projects on International Waterways*, in INTERNATIONAL WATERCOURSES, *supra* note 41, at 193-96 [hereinafter OP 7.50]; *World Bank Procedures 7.50: Projects on International Waterways*, in INTERNATIONAL WATERCOURSES, *supra* note 41, at 197-200 [hereinafter BP 7.50]. *See generally* Raj Krishna, *The Evolution and Context of the Bank Policy for Projects on International Waterways*, in INTERNATIONAL WATERCOURSES, *supra* note 41, at 31 (discussing the evolution of World Bank policy directive in this area beginning in 1956, and ultimately revised and reissued in 1994); *id.* (stating that OP/BP 7.50 use the term “international waterways” rather than international rivers,

Bank is the only international financial institution that has adopted such policies and procedures.⁷⁸ The World Bank's Operational Policy states that it recognizes that the cooperation and goodwill of riparian states are essential to the efficient use and protection of the waterway.⁷⁹ The World Bank, therefore, attaches great importance to the riparian states, making appropriate arrangements or agreements for these purposes and stands ready to assist riparian states in achieving this end.⁸⁰ In the absence of agreements to this effect, the World Bank requires the beneficiary state to notify the other riparian states of the proposed project.⁸¹ If one of the riparian states objects to the

or international watercourses because the application of the policies and procedures under OP/BP 7.50 extend beyond rivers and lakes to coastal waters).

78. See OP 7.50, *supra* note 77, at para. 2(a), at 193 (explaining that the policies and procedures apply to hydroelectric, irrigation, flood control, navigation, drainage, water and sewerage, industrial, detailed design and engineering and similar projects that involve the use or potential pollution of international waterways covered by the policy).

79. See *id.* at para. 3(a), at 193 (discussing agreements or arrangements for projects on international waterways).

80. See *id. infra* note 59 (explaining how the Bank used its good offices to assist India and Pakistan reach the 1960 Indus Waters Treaty); see also *supra* note 35 (stating that among other important initiatives on international waters the Bank is assisting with is the Nile Basin Initiative).

81. See OP 7.50, *supra* note 77, para. 4 at 194 (differing from the UN Convention or the recommendations of the Commission, the Bank requires notification of all riparians (downstream as well as upstream) of the project, regardless of whether the project would cause significant harm or not). OP 7.50 includes three exceptions to the notification requirement (i) projects involving additions or alterations for any ongoing schemes that require rehabilitation, construction or other changes that in the judgment of the World Bank will not adversely change the quality or quantity of water flows to other riparians, and will not be adversely affected by the other riparians water use; (ii) water resources surveys and feasibility studies, and (iii) projects in a tributary of an international waterway that runs exclusively in the lowest downstream riparian. *Id.* para. 7, at 194-95. It should also be added that if the beneficiary state indicates to the Bank that it does not wish to give notification, then the Bank itself does so. See UN Convention, *supra* note 11, art. 30 (noting the indirect procedure in the Convention is similar to the one used by the World Bank). But see OP 7.50, *supra* note 77, para. 4, at 194 (stating that if the beneficiary state does not wish to give notification, and objects to the World Bank's doing so, then the World Bank will discontinue processing the project). The notified states are provided with sufficient project details, and given a period not exceeding six months to reply. Past experience has shown some notified states may ask for an extension, and the World Bank has been willing to give an extension of two to three months, following the expiry of the original period. *Id.*, paras. 3-4, at 198.

project, the World Bank, in appropriate cases, may appoint one or more independent experts to examine the issues and provide an opinion thereon.⁸² Like the fact-finding commission, the independent experts do not take part in the decision-making and their opinion is submitted only for the World Bank's consideration.⁸³

Although the overall findings of the Commission with regard to technical, financial, economic, environmental, and social performance are empirical, no such parallel can be found in its discussion on sharing rivers for peace, development, and security. As mentioned before, five of the in-depth case studies relate to dams built on international rivers, which are subject to several treaties. The Columbia River, where the Grand Coulee Dam is built, is shared by the United States and Canada and is covered by a number of treaties and exchange of Notes.⁸⁴ The Zambezi River, where the Kariba Dam is built, is shared by Zambia, Angola, Zimbabwe, Mozambique, Malawi, Botswana, Tanzania, and Namibia. Some of the riparian states have entered into two treaties regarding the river. One of the treaties specifically addresses issues related to the Kariba Dam.⁸⁵ Similarly,

82. See BP 7.50, *supra* note 77, paras. 8-12, at 198 (describing procedures for the appointment of independent experts). The experts' are required to examine the project details and if they deem it necessary to verify such details or take any related action, the World Bank will assist. The experts meet on an *ad hoc* basis until they submit their report. *Id.* at para. 10, at 199.

83. See *id.* para. 11, at 199 (explaining that the experts technical opinion is submitted to the World Bank to assist the World Bank in making its decisions in light of the objection received, and does not in any way determine the rights and obligations of the riparian states).

84. See Agreement Relating to the Upper Columbia River Basin, Mar. 3, 1994, U.S.-Can., 109 U.N.T.S. 191. (codifying the treaty between the U.S. and Canada beyond the prior treaties of 1909 and 1962, as well as the exchange of notes thereon).

85. See Agreement on the Action Plan for the Environmentally Sound Management of the Common Zambezi River System, May 28, 1987, 27 I.L.M. 1109 (1998) [hereinafter Agreement on the Action Plan for Zambezi River System]; Agreement Concerning the Utilization of the Zambezi River, Zimb.-Zambia, July 8, 1987, in TREATIES CONCERNING THE NON-NAVIGABLE USES OF INTERNATIONAL WATERCOURSES: AFRICA, 273 (FAO Legislative Study No. 61, 1988) [hereinafter FAO Legislative Study]. Only Botswana, Mozambique, Tanzania, Zambia, and Zimbabwe entered into the Agreement on Action Plan for Zambezi River System, while Angola, Malawi, and Namibia are not the parties to the agreement. See Agreement on the Action Plan for Zambezi River System, *supra*, at 1109. Under

the Indus River, where the Tarbela Dam is built, is shared by India, Pakistan, Afghanistan, and China, and is the subject of the Indus Waters Treaty between India and Pakistan.⁸⁶ The Mekong River, where the Pak Mun Dam is built, is shared by China, Myanmar, Cambodia, Laos, Vietnam, and Thailand. Beginning in 1957 there have been three successive legal instruments for the Mekong River.⁸⁷ China and Myanmar are not parties to these agreements. The Orange River (also known as the Sengue River), where the Gariep and Vanderkloof Dams are built, is shared by South Africa, Lesotho, Namibia, and Botswana. Although there is no treaty encompassing the four riparian states, South Africa and Lesotho signed a treaty in 1986 on the Lesotho Highlands Water Project.⁸⁸

the Agreement Concerning the Utilization of the Zambezi River, the Zambezi river authority is entrusted with operating, monitoring, and maintaining the Kariba complex, which includes the dam, reservoir, telemeter stations and other related installations. See Agreement Concerning the Utilization of Zambezi River, *supra*, art. 9(a), at 278.

86. See Indus Waters Treaty, India-Pak., Sept. 19, 1960, 419 U.N.T.S. 126. Negotiations were carried out under the auspices and good offices of the World Bank. The Bank is a signatory for the purposes specified in Articles 5, (Financial Provisions) and 10 (Emergency Provisions) and Annexures F (Neutral Expert), G (Court of Arbitration), and H (Transitional Arrangements). See generally, NIRANJAN D. GULHATI, *INDUS WATERS TREATY: AN EXERCISE IN INTERNATIONAL MEDIATION* (1973) (describing the Bank's role as a mediator between Pakistan and India in drafting and concluding the treaty); SYED KIRMANI & GUY LE MOIGNE, *FOSTERING RIPARIAN COOPERATION IN INTERNATIONAL RIVER BASINS: THE WORLD BANK AT ITS BEST IN DEVELOPMENT DIPLOMACY*, at 3-5 (World Bank Technical Paper, No. 335, 1997) (examining the Bank's involvement in assisting Pakistan and India to resolve disputes in sharing the waters of the Indus River).

87. In 1957, Cambodia, Laos, South Vietnam, and Thailand signed the statute creating the "Committee for the Coordination of Investigations in the Lower Mekong Basin." See GREG BROWDER & LEONARD ORTOLANO, *The Evolution of an International Water Resolutions Management Regime in the Mekong River Basin*, 40 NAT. RESOURCES. J. 499, 505. This was followed in 1978 by the "Declaration Concerning the Interim Mekong Committee for Coordination of Investigations of the Lower Mekong Basin." See BROWDER & ORTOLANO, *supra*, at 509, n.85. In 1995, the four countries concluded the Agreement on the Cooperation for the Sustainable Development for the Mekong River Basin, Apr. 5, 1995, 34 I.L.M. 864. See also BROWDER & ORTOLANO, *supra*, at 518 (describing the new agreement as a new constitutional framework for the Mekong water management).

The Commission's Report does not include any analysis of those treaties,⁸⁹ nor does it explain whether any of these treaties provide for any form of notification.⁹⁰ The Commission's Report fails to discuss whether any of the states that built any of the dams covered by the in-depth studies, or by the cross check survey has actually notified any of the other riparian states. Thus, the Commission's Report did not discuss the performance of the riparian countries that built those dams, nor did it examine whether they have complied with the basic rules of international water law. Addressing this issue would have given some indication of the extent to which construction of those dams has complied with the basic principles and recommendations set forth in the seven strategic priorities on shared rivers.⁹¹ This is

88. See Treaty on the Lesotho Highlands Water Project, Lesotho-S. Afr., Oct. 24, 1986 in FAO Legislative Study, *supra* note 85, at 172 (dealing with the development and resource management in the Orange River).

89. The only reference to a treaty with regard to the eight case studies is the general mention of 1968 treaty on the Columbia River between the United States and Canada. See the WCD REPORT, *supra* note 1, at 175; see also *supra* note 46 (noting WCD Report misstated date of treaty as 1968 when it was actually 1961).

90. See The Indus Waters Treaty, *supra* note 88, art. VII(2) (detailing commitments to notify parties to the Treaty in case of any future plans for construction that would cause "inference").

91. In this connection, the WCD Report would have definitely benefited from a general discussion of the *Gabcikovo-Nagymaros* case and the role of the International Court of Justice in that dispute. See *supra* note 42. The *Gabcikovo-Nagymaros* case arose out of a dispute between Hungary and Czechoslovakia over whether or not to build two barrages over the Danube river, as envisaged under a treaty concluded between the two countries on September 16, 1997. Construction began in the late 1970s, but in the mid 1980s, environmental groups in Hungary, claiming negative environmental impacts of the barrages began agitating against the project. They forced the Hungarian government to suspend works on the project in 1989. Czechoslovakia insisted that there were no negative environmental impacts and decided to proceed unilaterally with a provisional solution consisting of a single barrage on its side. The project required diversion of a considerable amount of the waters of the Danube to its territory. Czechoslovakia claimed that this was justified under the 1977 treaty. As result of the unilateral action of Czechoslovakia, Hungary decided to terminate the 1977 treaty. In 1992, the situation was further complicated when Czechoslovakia split into two countries. As a result of the split it was agreed that Slovakia would succeed in owning the Czechoslovakia part of the project. By that time, Czechoslovakia had already dammed the Danube and diverted large amounts of its water into its territory. In April 1993, as a result of pressure from the Commission of the European Communities, the two countries agreed to refer the dispute to the International Court of Justice. The Court

unlike the analysis for the financial, economic, environmental, and social performance where the Commission entered judgments indicating an overall non-compliance with the basic standards in those areas. As such, the Commission's recommendations, regarding the international water law standards for dams on shared rivers, do not stem from any empirical data or any analysis of the five case studies. Rather, the Commission has only set out policy principles and recommendations for future dam projects.

D. SHARED RIVERS BETWEEN POLITICAL UNITS WITHIN COUNTRIES

The fourth recommendation of the Commission relates to rivers shared between political units within one country. The Commission emphasized that the seven strategic priorities are relevant regardless of whether the river is an international one, a national one shared between political units within a country, or a river within one province. In countries where water issues are controlled at the national level, the Commission recommended that the principles on shared rivers be embodied in national water legislation and that an appropriate policy framework be developed for the local level.⁹² In countries where sub-national political units have authority over water issues, the federal authority "should explore mechanisms to encourage good practice and provide incentives for compliance with the strategic priorities."⁹³ Licenses and environmental clearance, as well as federal funding, could be used for ensuring that environmental and social provisions are satisfied.

ruled in September 1997 that Hungary was not entitled to suspend or terminate the work on the project in 1989 on environmental grounds, and that Czechoslovakia and later Slovakia were also not entitled to operate the project based on the unilateral solution it developed without an agreement with Hungary. *See id.* at 46, 54, 82. The Court further ruled that Hungary was not entitled to terminate the 1977 treaty on the grounds of ecological necessity, and thus held that the treaty was still in force. *See id.* at 62, 82. The Court concluded, "Hungary and Slovakia must negotiate in good faith in the light of the prevailing situation, and must take all necessary measures to ensure the achievement of the objectives of the Treaty of 16 September 1977, in accordance with such modalities as they may agree upon." *Id.* at 83.

92. *See* WCD REPORT, *supra* note 1, at 255.

93. *See id.* at 255.

It is surprising that the Commission has given this issue such prominence since there are few countries where jurisdictional questions over water resources have raised issues between the federal authority and the political units within that country. The few examples include the United States, Australia, India, and Brazil, where the respective roles and responsibilities of the central and state governments are fairly defined.

E. BUILDING DAMS IN CONTRAVENTION OF GOOD FAITH NEGOTIATIONS

The fifth and last recommendation of the Commission addresses situations where dams on shared rivers are built in contravention of good faith negotiations between riparian states, including refusal to establish a panel, or rejecting its findings when it has been established and has issued its findings. In such cases, the Commission recommends that external financing agencies, whether bilateral, multilateral, or export credit agencies, withdraw their support for projects and programs promoted by that agency.⁹⁴

The Commission emphasizes that the decision to build a dam is often considered a sovereign decision.⁹⁵ However, the Commission also underscores both the need for the international community to take a strong and consistent stance, and the importance of compliance with the policies and guidelines of the financing agency in cases of shared rivers. The Commission also highlights the importance of the financing agencies harmonizing their policies towards shared rivers.⁹⁶ The Commission based its recommendation on the theory of fungibility of funds. This means that although the external agency may not be financing the dam built in contravention of good faith negotiations, its financial support for other projects in the same sector frees the agency's resources for other projects and programs related to the dam.⁹⁷ Another argument advanced in support of this recommendation is that by supporting other projects and programs, the

94. *See id.* (explaining that external support is important and the threat of losing it may be an incentive to engage in good faith negotiations with other riparian states).

95. *See id.* at 255.

96. *See id.* at 256.

97. *Id.*

external financing agencies are helping the development of the area around the controversial dam. This developed land will attract movement of people to that area, which, in turn, increases the consumptive and non-consumptive use of the waters of the shared river. This could result in less water reaching lower riparian states, thus exacerbating the adverse impact of the dam on those states.

This is the most far-reaching of all the Commission's recommendations in connection with shared rivers.⁹⁸ Most of the other recommendations are based on an elaboration of customary international water law, the UN Convention, or the World Bank Policy for Projects on International Waterways. However, this recommendation is a major innovative contribution to the field, and is based on the overall spirit enshrined in the principles of cooperation, good faith negotiations, and collaborative arrangements. The recommendation is likely to put pressure on some countries and their dam agencies, as well as the external financing agencies, to pay more attention to the established rules of good faith negotiations with other riparian countries. Indeed, this recommendation will certainly enliven and enrich the debate in this area.

CONCLUSION

As the OED Precise correctly noted, for the first half of the twentieth century, dams were regarded as engineering structures, and the emphasis was primarily on the generation of hydro-power, controlling floods, and improving management of water.⁹⁹ It was only in the 1960s that options assessment was introduced, and economic and financial analysis of dams became one of several major criteria for ac-

98. See *id.* ch. 8 (expanding on some of the other far-reaching recommendations of the Commission addressing other strategic priorities including (i) gaining public acceptance which could be viewed as more than consultation with the affected communities, (ii) the negotiated decision-making process, which could be viewed as curtailing the principle of eminent domain, and (iii) the free, prior and informed consent of indigenous peoples, which could be seen as giving them a veto power over the project. Some of the developing countries that rely on international financial institutions and export credit agencies for funding their development projects are likely to view these recommendations as raising the standards tremendously to their disadvantage, and making it more difficult for them to build dams).

99. See OEC Precise No. 125, *supra* note 2, at 2 (explaining shifts of emphasis in assessment of proposed dam projects).

cepting or rejecting a dam.¹⁰⁰ Thus, economics and finance gradually replaced engineering as the leading factor for consideration prior to building dams. Environmental and social considerations started to gradually emerge as major concerns in the 1970s. The voices of the environmentalists and affected people were widely heard and became a leading factor in the decision-making process regarding dams in the 1980s.

The adoption of the United Nations Convention on the Law of the Non-Navigational Uses of International Watercourses on May 21, 1997 brought international water law a long way. Although the UN Convention has not yet entered into force, a large majority of countries in the United Nations General Assembly have voted for it.¹⁰¹ Further, the UN Convention has received a number of endorsements. The reference to the Convention by the International Court of Justice in the *Gabcikovo-Nagymaros* decision and the urging by the World Commission for Water in the 21st Century and its prestigious Sovereignty Panel to the states to sign and ratify the UN Convention are two examples of endorsements received. The Commission has continued this trend and provided another major endorsement of the UN Convention and the basic principles enunciated by the Convention. Moreover, it has placed the principles of international water law on equal footing with the technical, economic, financial, environmental, and social concerns by including sharing rivers as one of its seven strategic priorities. Thus, international water lawyers now have a place, together with the engineers, economists, financial analysts, environmentalists, and affected people, including indigenous people, in the decision-making process on dams over shared rivers. Inclusion of international water law, together with the other disciplines, particularly environmentalists and affected people, is perhaps what the Commission has called "new voices, perspectives and criteria into decision-making."¹⁰²

This article has also attempted to highlight some of the weaknesses in the Commission's treatment of shared river issues. The

100. *See id.*

101. *See supra* note 30 and accompanying text (discussing the adoption of the Convention in details).

102. *See supra* note 13.

Commission failed to investigate whether and to what extent the principles of international water law have been followed in the in-depth case studies or the dams that were cross-check surveyed where such dams were built on shared rivers. Further, the Commission echoed the misunderstanding that there is a conflict between the principle of reasonable and equitable utilization and the obligation not to cause harm. As demonstrated earlier in this article, upon careful examination of international waterlaw principles, there is no conflict between these two principles.

Nonetheless, the Commission has strengthened and emboldened the basic requirements of cooperation and good faith negotiations over shared rivers. The Commission has also broadened the discussion over the optimal utilization of such rivers, from the narrow angle of sharing their waters to the wider approach of sharing the benefits derived therefrom. Further, the Commission's recommendation that external financing agencies withdraw support from the projects and programs of any agency that builds a dam in contravention of good faith negotiations is a positive contribution to the dams debate. These recommendations, as well as the endorsement and elaboration of the basic principles of the UN Convention, will no doubt enliven the debate on these vital issues. That, by itself, is a major contribution by the Commission to the field of international water law.