

Overview Some Aspects of International Law in Relation to Building Dams in the Developing Countries

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Abstract:

The paper reviews the rules of international law in the construction of special dams in developing countries. We have given the advantages and disadvantages of dam construction and summarized the principles of international law related to dam construction

Keywords: *international law, developing countries, dam construction*

1. Introduction: Advantages and Disadvantages of Dam Construction

A dam is a barrier or a wall built across a river which stops the river's flow and collects the water. The first dams were built about 5000 years ago in the Middle East.¹ The first purposes of dams were controlling the water level, supplying water and irrigation. Nowadays, there are many purposes of building dams, including supplying water, controlling flood and generating electricity, etc. More than 800,000 dams are in existence over the world, 47,000 of which are large dams, based on the International Commission on Large Dams definition.²

On the one hand, the construction of dams brings many benefits to human beings; on the other hand, this negatively affects society and environment. During the late twentieth century, many dams were built in Asia, Africa, and South America for irrigation, hydroelectric use which largely contributed to the economic development in the developing world. Approximately 30 to 40 percent of the world's irrigated land relies on dams. Additionally, as estimated hydroelectric dams also make up about 17.5 percent to 19 percent of the world's electricity.³ At the national level, hydropower supplies more than 50 percent of national electricity in many countries.⁴ However, the building of dam also caused arguments relating to using shared natural resources and negative impacts on the environment. Many dam construction decisions have ignored social and ecological impacts. In the last few decades up to 80 million people over the world have been forced to move to other places as a result of dam construction, and up to 60 percent of the world's rivers have been diverted.⁵ Dams also cause a significant decline in the water table, leading to substantial loss of aquatic and terrestrial fauna. In some regions such as Amazon and South East Asia, dams threatens to devastate the surrounding rainforest ecosystem.

2. The Principles of International Law in Relation to Building Dams

The construction of massive dams for water management and hydroelectric purposes in developing countries has resulted in both environmental and social impacts. This also has caused great hardship for the poor and for the indigenous people whose interests are often disregarded.⁶ Additionally, in terms of transboundary watercourse utilization, building dams in the upstream riparian states negatively affects not only the local society and environment but also the interests of the downstream states. Building dams is one

¹ N.A.F. Smith, *A History of Dams* (Citadel Press, 1972) 1.

² Evan Davies, "Valley of the dammed" (2001) 27(3) (2001 Summer) *Alternatives Journal* 6, 7.

³ Ibid; see also Frans H. Koch, "Hydropower—the politics of water and energy: Introduction and overview" (2002) 30(14) *Energy Policy* 1207 1208.

⁴ Koch, above n 3, 1208.

⁵ Davies, above n 2 7.

⁶ P.W. Birnie, A.E. Boyle and C. Redgwell, *International law and the environment* (Oxford University Press, Incorporated, 2009) 535.

of the ways to utilize the international rivers; however, there have been a number of disputes among the riparian countries that need to be resolved.

In order to control the pollution and water utilization, modern bilateral and regional treaties have tended to adopt the basin approach as the most efficient mean.⁷ One of the most concerned issues regarding the water management is the utilization of transboundary water. The Convention on the Protection and Use of Transboundary Watercourses and International Lakes (hereafter referred as to the 1992 UNECE Convention) is the first regional framework convention dealing with international watercourses. The 1992 UNECE Convention defines transboundary waters are surface or ground waters which mark, cross or are located on boundaries between two or more States.⁸

In terms of water resources utilization, there is an approach that is the principles of allocation in which the admissibility of watercourse pollution is to treat it as an aspect of the allocation of water resources. Before considering specific issues relating to pollution and environmental protection, it is, therefore, necessary to establish the basis on which water resources will be allocated among those states with a claim to their use.⁹ According to this approach, four theories are common: territorial sovereignty, territorial integrity, equitable utilization, and common management.¹⁰

The overview of the first theory, territorial sovereignty, is that states enjoy absolute sovereignty over water within their territory. They can extract water as much as necessary or can alter the quality of water regardless of the effect this has on the use or supply of water in downstream or contiguous states. This theory is often known as the Harmon doctrine.¹¹ Modern commentators mostly dismiss this doctrine.

In contrast, the territorial integrity theory would give lower riparian the right to a full flow of natural quality. Any interference with the natural flow of the upstream state would require the consent of the lower riparian. However, this doctrine is not strongly supported by state practice, jurisprudence, or the writing of commentators.¹²

Unlike the territorial integrity theory, the equitable utilization theory treats international watercourse as shared resources, subject to equitable utilization by riparian states. Equitable utilization is generally based on the balance of interests which accommodates the needs and uses of each state. This principle is substantially supported by judicial decisions, state practice, and international codifications.¹³ In the case relating to the Territorial Jurisdiction of the International Commission of the River Order, the Permanent Court of International Justice had to consider the right of the lower riparian to freedom of navigation in Polish water upstream.¹⁴ Its main finding favoured a community of interest in navigation among all riparian states based on equality of right over the whole navigable course of the river and the sovereignty of a state over rivers within its border is qualified by the recognition of equal and correlative right of other states.¹⁵ Convention on the Law of the Non-navigational Uses of International Watercourses (hereafter referred to as the 1997 UN International Watercourses Convention) provides watercourse states shall in their respective territories utilize an international watercourse in an equitable and reasonable manner.¹⁶ Article 6 of this Convention identifies factors relevant to determining what equitable and

⁷ Ibid 537.

⁸ *The Convention on the Protection and Use of Transboundary Watercourses and International Lakes*, opened for signature 17 March 1992, 1936 UNTS 269 (entered into force 9 October 1996) art 1.

⁹ Birnie, Boyle and Redgwell, above n 1 538

¹⁰ Ibid 540.

¹¹ Ibid 540.

¹² Ibid 541.

¹³ Ibid 542.

¹⁴ *The Territorial Jurisdiction of the International Commission of the River Order (United Kingdom v Poland) (Judgment)* [1929] PCIJ (ser A) No 23, 26.

¹⁵ Birnie, Boyle and Redgwell, above n 1 542.

¹⁶ *The Convention on the Law of the Non-navigational Uses of International Watercourses*, opened for signature 21 May 1997 (entered into force on 17 August 2014), 36 ILM 700, art 5.

reasonable utilization is by listing groups of factors.¹⁷ The same principle has also adopted in the 1992 UNECE Convention.¹⁸ However, as scholars have commented, this list is not meant to be exhaustive because consideration must be given to all the interests likely to be effected by the proposed use of watercourse. Suggested that both benefits and the negative effects of particular use should be considered, but the list of factors does not include the priority or weight given to each one or how conflicts are to be reconciled.¹⁹ This weakness of the equitable utilization theory leads to another theory on which the allocation of water resources has been based, that of common management.

Common management is a theory that is logically based on the combination of the idea that watercourse basins are most efficiently managed as an integrated whole, and the needs of effective mechanism to secure cooperation on economic, social and environmental objectives.²⁰ Modern international law codifications have experienced this theory by forming international institutions in which all riparian states cooperate in formulating and implementing policies for the development and use of watercourse.²¹ There have been a number of international watercourses in which common management institutions have become the basis for environmental regulation and sustainable development. Examples of common management can be found in the Lake Chad Basin Commission, the River Niger Commission, the International Co-ordinating Committee of the River Plate Basin, the Amazonian Cooperation Council, the Danube River Protection Commission, and the Mekong River Commission. The development of this approach has been adopted as international codification. Both the 1992 UNECE Convention and the 1997 UN International Watercourses Convention include provision for common management institutions. However, the two Conventions provide not exactly the same provision of how strong the common management will be established. Under the provision of the 1997 UN International Watercourses Convention, the watercourse states may only “consider” the establishment of joint mechanisms or commissions as a mean of giving effect to their duty of cooperation in order to attain optimal utilization and adequate protection of an international watercourse.²² In contrast, the 1992 UNECE Convention requires riparian states both to conclude bilateral or multilateral agreements or arrangements to prevent, reduce, and control any transboundary impact and joint bodies, whom tasks are defined in some details.²³

Despite the improvement of international environmental law principles in relation to sharing transboundary water, there have been opposing opinions between upstream and downstream states regarding the uses of water. While downstream states would like as far as issuing aggressive threats to protect their share of successive rivers, upstream states seem to neglect their duty to share “their” water with their downstream neighbours.²⁴ For example, Turkish – Syrian relations have been strained because of their tense upstream – downstream relations as Turkey cut down the flow of the Euphrates through the dams of Southeastern Anatolia Project (*Turkish: Güneydoğu Anadolu Projesi, GAP*). As a lower riparian, Syria reacted by supporting the Kurdish guerrilla group (PKK) who are fighting for secession from Turkey. Other examples can be seen in the relations between Egypt and its upstream neighbours of the Nile, China and its

¹⁷ United Nations, *The Convention on the Law of the Non-navigational Uses of International Watercourses*, opened for signature 21 May 1997 (entered in force on 17 August 2014), 36 ILM 700, art 6. These groups are:

- (a) Geographic, hydrographic, hydrological, climatic, ecological, and other factors of a natural character;
- (b) The social and economic needs of the watercourse States concerned;
- (c) The population dependent on the watercourse in each watercourse State;
- (d) The effects of the use or uses of the watercourses in one watercourse State on other watercourse States;
- (e) Existing and potential uses of the watercourse;
- (f) Conservation, protection, development and economy of use of the water resources of the watercourse and the costs of measures taken to that effect;
- (g) The availability of alternatives, of comparable value, to a particular planned or existing use.

¹⁸ *The Convention on the Protection and Use of Transboundary Watercourses and International Lakes*, above n 2 art 2.

¹⁹ Birnie, Boyle and Redgwell, above n 1 543.

²⁰ Ibid 544.

²¹ Ibid.

²² Nations, above n *The Convention on the Law of the Non-navigational Uses of International Watercourses*, above n 11 art 8; see also Birnie, Boyle and Redgwell, above n 1 546.

²³ *The Convention on the Protection and Use of Transboundary Watercourses and International Lakes*, above n 2 art 9.

²⁴ E. Benvenisti, *Sharing Transboundary Resources: International Law and Optimal Resource Use* (Cambridge University Press, 2002)16.

lower riparian of the Mekong River, India, and its neighbours Bangladesh and Nepal.²⁵ In these cases, the stronger countries usually acted unilaterally regardless of the weaker neighbours. China and Turkey did not care about their duty under international law to cooperate with their downstream neighbours in terms of using shared rivers. The two countries also voted against the 1997 UN International Watercourses Convention.²⁶ Those are the weaknesses of international environmental law principles in relation to sharing transboundary water

3. International Lending Organizations and Funds for Building Dams in the Developing Countries

There are a number of ways that dam projects in developing countries can be financially supported. For example, by the request of a borrowing nation government or by the suggestion of international engineering and construction companies which often lobby the developing governments to urge them to request dams. In many cases, the primary project initiators are multilateral development banks.²⁷ It is noted that many developing countries do not have a heightened sensitivity to the kinds of the environmental cost when they wish to build dams for their economic development purposes. The borrowing country governments may not actively prepare the dam projects themselves. They, therefore, rely on the preparation for the projects provided by the multilateral development banks (hereafter referred as to MDBs) which are the sponsors of the projects.²⁸ That will become a problem if environmental and social aspects are overlooked. Usually, MDBs loans are credited in order to assist the developing countries to develop their economies or to alleviate local poverty. However, many of these loans have harmed the host country's economy and caused social and environmental chaos along the way.²⁹

Although MDBs have improved their environmental accountability in the process of lending,³⁰ political influence is another aspect of funding dam construction. Foreign governments would like to use their influential role in international financial institutions and then through the funding process to influence the debtor countries. For example, in Ghana's Volta River Project, which was funded by the World Bank, the United States government promoted this project with the aim of gaining political influence in the fledgling African nations. Along with this, Kaiser Aluminum and Chemical Corporation, a US company, would also procure a large source of cheap electricity for an aluminum plant.³¹ China, further to the term "China's peaceful rise" has become a powerful sponsor for many dam construction projects in Asia, Africa, and South America. Providing funds through its state-owned financial institutions, China has now had a certain influence on debtor countries.³² Many controversial large dams such as Merowe Dam in Sudan, the Yeywa Dam in Burma, the Kamchay Dam on the Mekong River in Cambodia and Mppanda Nkuwa Dam in Mozambique have been provided with critical funding by China Exim Bank, an official export credit agency of the Chinese government.³³ The increase in China's funding dam construction overseas can be explained by a favorable policy of the Chinese government known as the "going out" strategy.³⁴ One of the targets of the strategy is that it focuses on funding for dam constructions in the developing world where there have been high demands of hydropower for economic development, but it is also a way in which the Chinese government improves its influence over the borrower countries. In the case of Merowe Dam in Sudan, despite the fact that independent international consultants revealed the potential environmental and social

²⁵ Ibid 17.

²⁶ Ibid.

²⁷ Zygmunt J.B. Plater, "Multilateral development banks, environmental diseconomies, and international reform pressures on the lending process: The example of third world dam-building projects" (1989) 9 *Boston College Third World Law Journal* 169, 190.

²⁸ Ibid 191.

²⁹ John M. Updegragh, "Large-Scale, Capital-Intensive Development Projects in the Third World: Congressional Influence over Multilateral Development Bank Lending" (1993) 13 *Boston College Third World Law Journal* 245, 347.

³⁰ Peggy A. Rodgers, "Looking a Gift Horse in the Mouth: The World Bank and Environmental Accountability" (1990) 3 *Georgetown International Environmental Law Review* 457

³¹ Updegragh, above n 67, 360

³² Kristen McDonald, Peter Bosshard and Nicole Brewer, "Exporting dams: China's hydropower industry goes global" (2009) 90, Supplement 3(0) *Journal of Environmental Management* S294, S294

³³ Ibid S297.

³⁴ Ibid S298.

impact problems of the dam project, Chinese authorities have by and large continued to defend China's involvement in the Merowe Dam.³⁵

In the case of the Xayaburi Dam on the Mekong River in Laos, a Thailand construction company was selected as the builder of the project. This project is funded by six Thai commercial banks, including the state-owned Krung Thai Bank. Ninety five percent of the dam's electricity will be sold to Thailand.³⁶ Despite requests from Cambodia and Vietnam, Laos and Thailand refused to study the dam's transboundary impacts before beginning construction.³⁷ This raises serious concerns about what may be hidden behind the relations between the two upstream Mekong River countries regarding the parties' obligations under the Mekong Agreement.

4. Public Participation in the Decision-Making Process of Building Dams

Public participation is one key aspect of integrated water resources management. Many joint bodies which were created by water resources management agreement have accumulated considerable expertise and created a number of mechanisms to ensure active participation of non-governmental organizations (NGOs) and other stakeholders in their activities. In the ECE/UNEP publication: *Water management: Guidance on Public participation and Compliance with Agreements*, there is a set of recommendations to apply the provisions of the UNECE Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (Aarhus Convention, 1998) to water management, including transboundary waters.³⁸ In particular, the Guidance includes the following recommendations:

- The Riparian States and joint bodies should provide for the participation of NGOs as nonvoting participants in the meetings of joint bodies and in the meetings of subsidiary organs of joint bodies. Conditions for inviting NGOs to participate as observers must be based on reasonable criteria, which should be clear to the public.
- The Riparian States and joint bodies should establish procedures so that the public can have an oversight role in the conduct of transboundary cooperation.
- The Riparian States shall ensure public participation in the development of international documents, plans, and programmes for specific catchment areas.
- The riparian States are encouraged to provide for public participation, including NGOs, in the preparation of the international water agreements. NGOs could be invited to participate in intergovernmental negotiations.
- Joint bodies should have the opportunity to receive and consider information from the public. The public should be given the opportunity to submit inquiries in writing to the joint body. Joint bodies should develop a public communication strategy and establish a focal point for liaison with NGOs.³⁹

As a key strategic priority in the decision-making of equitable and sustainable dam projects, gaining public interest and acceptance is just not limited to approving or rejecting a dam project, but also extends to the policy, programs, and institutional and technical setup surrounding the dam project.⁴⁰ In recent years, there has been an improvement in developing countries regarding environmental and social impact when planning and proceeding dam construction project. In the Mekong River Basin region, the Asian Development Bank has been promoting some energy projects to become greener with public involvement as a key factor of their success. However, the importance of public participation in

³⁵ Ibid S299.

³⁶ International Rivers, *Xayaburi Dam*, 30 September 2013, International Rivers, <<http://www.internationalrivers.org/campaigns/xayaburi-dam>>

³⁷ Ibid.

³⁸ United Nations and United Nations. Economic Commission for Europe, *River Basin Commissions and Other Institutions for Transboundary Water Cooperation: Capacity for Water Cooperation in Eastern Europe, Caucasus and Central Asia* (UN, 2009) 29-30.

³⁹ ECE/UNEP Network of Expert on Public Participation and Compliance, *Water management: Guidance on Public participation and Compliance with Agreements*, Geneva 2000,

⁴⁰ Naho Mirumachi and Jacopo Torriti, "The use of public participation and economic appraisal for public involvement in large-scale hydropower projects: Case study of the Nam Theun 2 Hydropower Project" (2012) 47(0) *Energy Policy* 125, 125-6.

transboundary water projects is often overlooked and therefore needs to be taken into account as an important part of the projects.

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