Freshwater and Energy in the Context of International Dispute Settlement

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1. Introduction

1. Access to energy is vital for states: their economy and the survival of their populations depends on it.[1] The use of international watercourses for the production of hydro-electricity is becoming increasingly attractive to states, since renewable sources of energy are perceived as an appropriate means for addressing climate change[2] and energy security concerns. However, hydroelectric projects involve enormous investment and have significant effects (social, economic, environmental and others).

2. Against this background, it is not surprising that when hydroelectric power generation projects are constructed and operated on international watercourses, disputes between riparians arise and will continue to arise.

3. I will analyse two facets of the nexus between water and energy as they are manifested in the context of contentious proceedings before international courts and tribunals. More specifically, I will focus on two landmark cases of international watercourses law and of general international law: 1997 ICJ Judgment *Gabcikovo-Nagymaros (Slovakia/Hungary)*; and the 2013 *Indus Waters* Arbitration *(Pakistan v. India)*. The Gabcikovo-Nagymaros Treaty and Indus Waters Treaty are very different agreements, and the facts of each dispute differ considerably. *Gabcikovo-Nagymaros* involved a joint project from its inception, which was later abandoned and unilaterally executed by one of the parties, while *Indus Waters* involved a hydro-electric project contemplated from its commencement as unilateral, in the framework of a treaty that allocated rights of use and permitted such unilateral uses. However, these two cases allow us to identify the main tensions that may arise in the context of disputes concerning hydroelectric uses of transboundary rivers, and also allows to reflect on wider issues about international law: about the composition of international courts and tribunals, their capacity to deal with legal disputes that are heavily dependent on scientific data, and finally the relationship between the International Law Commission and international courts and tribunals.

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[1] Case 72/83 *Campus Oil and Others v. Minister for Industry and Energy* [1984] ECR 2727, para. 34.

[2] In 2011, the International Renewable Energy Agency was established, which today has 141 members (140 states and the EU). In 2012, the UN General Assembly endorsed the 2012 Rio Declaration 'The Future We Want' which included a chapter on energy and which reaffirmed the 'support for the […] increased use of renewable energy sources […]', and their importance for 'for sustainable development, including in addressing climate change.' Annex to UNGA 66/288, The future we want, 11 September 2012, paras. 127-128.

4. Under the 1997 Convention on the Non-Navigational Uses of International Watercourses the competing rights of riparians in the use of the river are governed by the rule of equitable utilization (Art 6), and parties to the Convention are also obliged to prevent significant transboundary harm (Art 7). However, given that the Convention entered into force on 17 August 2014, it has not applied to any judicial proceedings. The two disputes that I discuss do not apply the Convention as treaty law. Rather they applied bespoke river treaties, and take into account customary rules relating to watercourses/environment either as a matter of interpretation or they apply rules of customary international law (on state responsibility) and in that context they take into account rules of CIL on watercourses to determine the content and application of the rules of state responsibility.

5. *First*, I will demonstrate how international case law has struck a balance of rights of use of riparian states.

6. *Second*, I will discuss how international courts and tribunals have dealt with the antagonism between, on the one hand, the permanence of hydro-electric projects (and the need for stability for the construction and operation of hydro-electric projects), and, on the other hand, development of international law.

2. Balance of Rights of Use

1. The dispute about the Gabcikovo-Nagymaros Dam arose out of the 1977 Treaty between Czechoslovakia and Hungary on a joint project to build a hydroelectric facility on river Danube. In 1989, Hungary suspended and later abandoned work on the agreed project because as it claimed it faced serious criticisms about the environmental impact of the project, and claimed it was in state of necessity under the law of state responsibility. In response, in 1991, Slovakia unilaterally implemented a variant to the initially agreed project, which reduced dramatically the water flow on the river. It argued that its conduct was lawful, but even if it was not, that its wrongfulness was precluded as a countermeasure against Hungary's prior wrongful act. Hungary protested and notified the termination of the treaty claiming it to be lawful on the basis of a number of grounds under the law of state responsibility and of the law of treaties, some of which related to environmental considerations. After the mediation of the European Commission, the two states concluded a Special Agreement by which they submitted the dispute to the jurisdiction of the International Court of Justice.

2. In *Gabcikovo-Nagymaros*, the dispute was couched in terms of termination of the treaty (under the law of treaties) and in terms of the secondary rules on state responsibility. In relation to Slovakia's claim that it was taking lawful countermeasures against Hungary when diverting the river Danube, the Court

assessed a number of conditions of lawfulness of countermeasures, including the proportionality. The ICJ noted the 'community of interest' of riparians, as pronounced by the Permanent Court of International Justice (PCIJ) in the *River Oder case*, and connected it to the principle of equitable use of international watercourses by referring to the 1997 Convention,[3] thus lending support to the existence of such a rule under customary international law.

3. In contrast, the *Indus Waters Arbitration* (both the Partial and Final Awards) dealt with the application and interpretation of primary rules found in the 1960 Treaty between India and Pakistan, and the IBRD, which was a party to the Treaty in relation to specific provisions that related to its involvement in projects in the region.[4]

[3] Para. 85. As a matter of primary obligations, unilateral use of international watercourses is not prohibited. The riparian state that decides to construct and operate a hydroelectric project is not under an obligation to obtain the prior consent of other riparians. Rather it is obliged to negotiate in good faith, and not to frustrate these negotiations by prematurely authorizing such project. On the other hand, the optimum manner for managing hydro-electric (and other) uses of an international watercourse is by common utilization through cooperative mechanisms. The ICJ in *Gabcikovo-Naguymaros*, in relation to the request (under the *compromis*) to determine the parameters in which the parties will negotiate on the modalities for the execution of the Judgment regarding the 1977 Treaty, prescribed this solution. Para. 147. However, the Court did not suggest that there is an obligation upon riparian states (under CIL) to jointly operate hydroelectric projects. The principle of community of interests has consequences in relation to secondary rules of international law. In *Gabcikovo-Nagymaros*, Slovakia argued that its unilateral diversion of waters in the Danube by operating variant C was a lawful countermeasure against Hungary's prior internationally wrongful act in breach of the bilateral treaty concerning the joint dam. The Court assessed whether Slovakia's measure met the requirement of proportionality in order to determine whether the wrongfulness of Slovakia's conduct could be precluded under the law of state responsibility, as a countermeasure. It found that 'by unilaterally assuming control of a shared resource, and thereby depriving Hungary of its right to an equitable and reasonable share of the natural resources of the Danube', Czechoslovakia failed to meet the proportionality required under customary international law. Para. 85. Similarly, when dealing with the consequences of international responsibility, the Court concluded that the consequence of the wrongful acts of both parties would be wiped as far as possible if they resume their cooperation in the utilization of the shared water resources of the Danube, thus urging parties to re-establish a cooperative administration over the project. Para. 150.

[4] Perhaps less so the Interim Measures, mainly because the condition for issuing the measures were not the protection of the interest of one of the parties (as is for instance the case of interim measures under the ICJ Statute, see Article 41), but rather to avoid 'the risk of fait accompli that compromises the liberty of the Court of Arbitration to render its Award in the manner it considers to be legally warranted or the Parties' ability to implement such award without prohibitive delays or costs'. *Order of Interim Measures*, para. 139.

4. The background of the dispute emphasizes its importance and complexity. Pakistan and India have a long-term dispute concerning sovereignty over the Jammu area (administered by Pakistan) and Kashmir (administered by India), where the hydroelectric projects were to be constructed. In addition, the dispute before the Arbitral Tribunal was the third out of the disputes concerning the use of the river that had arisen between the parties since 1948. However, the territorial dispute was expressly left unaffected by the 1960 Treaty, which regulated the parties' rights and obligations only in relation to the use of the waters (Art XI(1)). Hence, the Tribunal's awards had no bearing 'on the rights or claims that either Party may maintain to sovereignty over the territory of Jammu and Kashmir'.[5]

5. The dispute arose out of India's decision to construct a facility for the generation of hydroelectricity ('KHEP') by diverting water from the river. One of the aspects of the dispute was that India's project would substantially reduce the capacity of Pakistan's future downstream project.

6. The parties having failed to resolve the dispute about KHEP by agreement (pursuant to the dispute settlement provisions of the treaty), Pakistan initiated arbitration proceedings (pursuant to Article IX and Annexure G) against India.[6]

7. In the *Partial Award*, the Tribunal was called to determine whether the diversion of waters from the river in the course of operation of the KHEP met the requirements of the Treaty (Paragraph 15(iii) of Annexure D), pursuant to which India's project would be permissible 'only to the extent that *the then existing* Agricultural [...] or Hydroelectric Use by Pakistan on [one of the] Tributar[ies] would not be adversely affected'.

8. Pakistan and India disagreed as to the interpretation of the Treaty.[7]

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[5] Para. 362.

[6] Pakistan requested Provisional Measures and the Tribunal issued an order requiring India *inter alia* to suspend the construction of permanent works leading to the erection of a dam.

[7] Pakistan argued that the construction and any regular operation of KHEP would be subject to its then existing agricultural and hydro-electric uses: para. 415. In contrast, India argued that the critical date for determining the 'then existing use' is the date when India communicates to Pakistan its 'firm intention' to proceed with a project (pursuant to Paragraph 9 of Annexure D). Para. 425. This provision requires India to provide Pakistan with complete information about its intended design at least 6 months before commencement of construction). Para. 426. The Tribunal rejected this interpretation, because the context of Paragraph 15(iii) denotes that the notification of design is insufficient to exhibit a 'firm intention' to proceed. Para. 427. Following the notice Pakistan may object and dispute resolution may follow under the Treaty (Paras. 10-11), while design changes are also possible during the construction phase prior to it coming to operation and even when it comes to operation (Para. 12).

9. The Tribunal interpreted the terms of the treaty in their context and in the light of the treaty's object and purpose (the customary general rule of treaty interpretation set out in Article 31(1) of the VCLT), and found the following:[8]

- Rejected both interpretations.[9]
- Established India's right to construct and operate KHEP,[10] since it coupled **intent with action**[11] during a period throughout which numerous fact accumulated (tenders, financing secured, government approvals in place and construction underway) that achieved a level of certitude indicating that a project will proceed firmly.[12]
- And found that the treaty established Pakistan's right to a portion of the waters *throughout the year* for its *existing* agricultural and hydro-electric uses during the operation of India's project.[13]

10. Thus, India was permitted to construct and operate the project, but it was obliged to operate it in a manner that ensures a minimum flow of water downstream. The Tribunal reached this conclusion partly by interpreting the text of the treaty, with a view to ensuring that the *entitlements of both parties under the treaty must be made effective so far as possible*;[14] and partly by interpreting the treaty taking into account rules of CIL for the protection of the environment, employing the customary rule set forth in VCLT Article 31(3)(c).

11. In the *Final Award*, the Tribunal determined the precise minimum water flow that India was obliged to ensure downstream pursuant to the Treaty. It took into account Pakistan's uses, since the Treaty's text required India's uses not to adversely affect Pakistan's uses, but noted that this requirement cannot deprive India of its right to operate its project, because India's right is a right to operate the project effectively.[15]

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[8] It adopted an interpretation, which would ascribe meaning to all the provisions of the treaty **and** which would realise the treaty's object and purpose. *Iron Rhine*, para. 80. R. Gardiner, *Treaty Interpretation* (Oxford University Press, 2008) p. 160.

[9] Pakistan's interpretation was rejected because it would mean that '[a] fixed point after which a particular design would create a right upon which India could rely would never emerge' (Para. 417, 423), and would thus deprive India of 'a key benefit recognized in the Treaty' (para. 423). Such interpretation was irreconcilable with the context of Paragraph 15(iii) [other provisions in Annexure D] (Para. 415-417), and with the object and purpose of the Treaty. (Para. 424). India's interpretation was rejected because it was not compatible with the realities of an *actual* hydroelectric project.

[10] Para. 435.

[11] Key aspects of planning and implementation, e.g. approvals, EIA, financing, public consultations. Para. 437, 441-442.

[12] Para. 429.

[13] Para. 436.

[14] Para. 446.

[15] McCaffrey, *The Law of International Watercourses* (Oxford University Press, 2007), p. 399. Final Award, para. 108. The Tribunal took into account the rights of use of both riparians and the effect of the minimum flows on the environment (on the basis of the evidence submitted to it by the parties in the form of EIAs). Although the Tribunal

12. And again it took into account rules of customary international law for the protection of the environment. It limited itself to the obligation to mitigate significant transboundary harm. It expressly did not apply the precautionary approach because the Indus Waters Treaty included a specific interpretative provision circumscribing the interpretative role of the Tribunal (Annexure G, paragraph 29), which limited its recourse to extraneous rules of customary international law to the extent necessary for the purpose of treaty interpretation.[1617] In fact, the Tribunal being very cautious specifically rejects the possibility of replacing the treaty's provisions with extraneous rules of international environmental law, by making express reference to the Sep Op of Dame Rosalyn Higgins (para. 49) in the *Oil Platforms case (Merits)* according to whom the ICJ in that case replaced the applicable law by referring to 31(3)(c) rather than interpreting the US/Iran bilateral agreement.

13. In other words, the balance of rights of use of riparian states may be reflected in the rule of equitable use that may be relevant when assessing the lawfulness and application of rules of state responsibility; or in relation to treaties allocating rights of use case law **has used** the general rule of treaty interpretation in order to establish the precise rights of use the two parties.

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interpreted the bespoke treaty, it reached a result that arguably is similar to the result that would have been reached if the principle of equitable utilization applied *per se*, by taking into account a number of factors prescribed in Article 6 of the 1997 Convention in order to achieve the equitable utilization of the international watercourse (e.g. effects of use on other riparians, ecological factors, existing and potential uses, conservation/protection of water resources).

[16] It did not however examine whether these rules were also applicable to the IBRD, which may either imply that it consider that the IBRD is bound by such CIL rules, or that the treaty provisions that the Tribunal was interpreting by taking into account CIL, were not applicable to the IBRD, since the latter has expressed consent to be bound in relation to particular provisions of the Treaty, which do not include Annexure D which was the part of the Treaty being applied here.

[17] For instance, the constrains of 'only to the extent necessary for [the treaty's interpretation]' allowed the Tribunal in the *Final Award* to chose to apply the rule to mitigate significant transboundary harm, but not to adopt the precautionary approach, because it considered it not only unnecessary but beyond its mandate (paragraph 29 of Annexure G). Although the pleadings (written and oral), which would have assisted in better understanding the arguments and practice of the two states, are not publically available, the Tribunal implicitly recognized that the precautionary approach is a rule of CIL. It could perhaps be inferred from its reasoning that the precautionary approach if used to interpret the treaty would require India not to go ahead with the project either until it would prove that its activity would be harmful (thus operating as a reversal of burden of proof which is an option rejected by the ICJ in *Pulp Mills*), or because the content of the precautionary principle would require not constructing the project as a preventive measure.

3. Reconciling Permanent/Long-Term Infrastructure with Changing Conditions and Law

1. The second manifestation of the nexus between water and energy in international case law is that between the long-term use of permanent hydroelectric infrastructure, and the developments of international law and in conditions (e.g. environmental conditions on the river, change in scientific knowledge, or change in uses of the river by other riparians).

3.1 Developments in International Law

2. In both these cases the tribunals took into account extraneous rules of customary international law applicable between the parties when interpreting the bespoke river treaties.

3.1.1 Gabcikovo-Nagymaros

3. A number of Hungary's claims in its effort to justify the termination of the treaty related to change of circumstances[18] and the change in law,[19] but were all rejected by the ICJ. In fact, the provisions of the bilateral treaty specifically required parties to take into account environmental protection thus incorporating emerging norms of international law.[20]

4. I will focus my discussion on the part where the Court determined how the parties had to negotiate with a view to reaching an agreement about the modalities for the execution of the Court's Judgment (pursuant to the 1993 Special Agreement). More specifically, in *Gabcikovo-Nagymaros*, the Court considered that the provisions of the 1977 Treaty (Art 15 and 19) impose on the parties a 'continuing – and thus necessarily evolving – obligation to maintain the quality of water and to protect nature, taking into account […] new norms […].[21] The Court's reasoning implies that the treaty should be interpreted by taking into

[18] Hungary attempted to justify its unilateral notification of termination of the bilateral treaty on a number of grounds under the law of international responsibility (state of necessity), and the law of treaties (impossibility of performance, fundamental change of circumstances, prior material breach of the treaty, the development of new international obligations for the protection of the environment), some of which related to changing conditions (scientific environmental knowledge, as part of the argument for fundamental change of circumstances) and the development of international environmental law (argument for fundamental change of circumstances, and the development of new international obligations for the protection of the environment). The Court rejected them all, and found that the treaty had not been terminated.
[19] The ICJ proclaimed that new requirements of international law for the protection of the environment were not *jus cogens* (para. 112), and hence they would not terminate treaties in conflict with them. (para. 112).
[20] Para. 112.
[21] Para. 140.

account relevant new rules applicable between them (see also express explanations in Sep Opinion of Judge Weremantry and Sep Op Judge Bedjaoui).

3.1.2 Indus Waters Arbitration

5. In the *Partial Award* of *Indus Waters*, the Tribunal found that India is obliged under the Treaty to ensure minimum downstream water flow reaches Pakistan,[22] and in its *Final Award*, the Tribunal determined a precise minimum flow through India's KHEP,[23] by taking into account rules of customary international law.[24] More specifically, by interpreting the Indus Waters Treaty taking into account the due diligence obligation to prevent and mitigate transboundary harm,[25] the duty to undertake an EIA, and the 'principle of SD'.[26]

6. Two points are called for here.

7. *First*, the reasoning in *Indus Waters Arbitration (Partial and Final Awards)* represents a shift (in case law) from the 'concept of SD' (as called by the ICJ in *Gabcikovo-Nagymaros*, 1997) to the 'principle of SD' as a rule of CIL. The Tribunal found that the principle of SD translates into 'a requirement […] to undertake an EIA […].'[27] However, as established by the ICJ in *Pulp Mills*, the obligation to undertake an EIA in a transboundary context is an autonomous procedural obligation (under CIL), which at the same time may assist in assessing whether the due diligence obligation to prevent transboundary harm (under CIL) has been complied with. In other words, the Tribunal in *Indus Waters* did not need to reach out here to an alleged 'principle of SD', whose content is not sufficiently precise (and its value as a rule is questionable).

8. *Second*, the issue of new developments of law seems to be incidental to the case, because - according to the Tribunal - the 1960 Treaty on Indus Waters was not concluded before the development of a number of rules of customary international law relevant to the protection of the environment. For the Tribunal the interpretation was not taking into account newly developed rules, but relevant (contemporary) rules applicable between the parties.[28] However, this cannot be the case for all the rules (or alleged rules) taken into account by the Tribunal. The customary obligation to undertake an EIA in a transboundary context is more likely to have been formed after the Stockholm Conference on the Human Environment (1972), and the concept and content of sustainable development had not even been articulated in 1960 (Brundlandt Report, 1987).

[22] Para. 446.
[23] Para. 87.
[24] Para. 87.
[25] Para. 448.
[26] Partial Award, para. 87.
[27] Para. 450.
[28] Para. 452.

3.2.2 Changing Circumstances

9. In relation to changing conditions over time, the Tribunal in *Indus Waters* (*Final Award*) recognized that the fixing of a rate of minimum flow would mean that changing environmental conditions[29] and the development of Pakistan's new uses of the downstream would not be accommodated.[30]

10. The Tribunal did not address this issue by virtue of interpretation of the treaty by taking into account the obligation to mitigate significant transboundary harm, which involves due diligence - a variable concept requiring adaptation to the scientific knowledge and evolving technology, as the ITLOS acknowledged in its Advisory Opinion in the *Responsibilities regarding Activities in the Area*.

11. Rather, the Tribunal required that the parties reconsider in the future the minimum water flow in order to ensure that the doctrine of *res judicata* does not extend 'into circumstances in which its reasoning *no longer accords with reality along the river*.' [31] It thus required (1) KHEP to be completed in a fashion that accommodates possible future variations in the minimum flow; (2) and that after 7 years after the diversion of water via KHEP, any party would be allowed to seek reconsideration of the minimum flow through the Permanent Indus Commission.[32]

12. This determination denotes the need for continuing cooperation of riparian states, especially through permanent institutional equipment, such as a river commission, that does not only prevent and resolve disputes, but can also facilitate the treaty's effective implementation in the long-run. As such the award supports that management through cooperative machineries is the optimum way to ensure equitable utilization of the shared resource,[33] which was supported by the ICJ findings in *Gabcikovo-Nagymaros*.[34]

4. Conclusions

1. So, what do we learn from these two cases about the nexus between freshwater and energy under international law?

2. *First*, disputes about transboundary rivers and generation of hydroelectricity before international courts and tribunals may involve (at least) three 'tensions':

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[30] Para. 88.
[31] Para. 118.
[32] Para. 119.
[33] Birnie, Boyle, Redgwell, p. 544, 546; McCaffrey, p. 402, 476, 478.
[34] [147].

- First, **competing rights of use of the river** (e.g. *hydro-electric uses v. agricultural uses* or *v. hydroelectric uses of another riparian*). In the context of interpreting primary treaty rules that allocate rights of use, the interpretation of the treaty's terms in their context and in the light of the object and purpose of the treaty along with taking into account obligations to protect the environment (rather than the principle of equitable and reasonable use under CIL) has allowed tribunals to achieve a balance between rights of use. Additionally, unilaterally diverting waters as a countermeasure would unlikely meet the condition of proportionality and would render such countermeasure unlawful.
- Second, **disputes have involved the 'competition' between the long-term stability for hydroelectric power generation and the developments in international law** and in the conditions on the river (environmental or use-related). The customary rule embodied in VCLT Art 31(3)(c) has allowed a interpretation by taking into account new rules of international environmental law.
- Third, and as a completely separate matter to developments of international law, the tribunals favour the continuing cooperation of the parties to address the changing conditions on transboundary rivers (*Gabcikovo-Nagymaros*, para. 147; *Indus Waters Final Award* - through river Commissions).

3. These two cases importantly illustrate two wider issues about international law: (a) that disputes that heavily involve scientific data can be resolved by judicial organs; (b) it illustrates the dialogue between the ILC and international courts and tribunals.

4. The *Indus Waters Aribtration* is insightful about the international judicial function. A preliminary objection may arise (and has arisen in the *Indus Waters case*) that the dispute is one that cannot be resolved by a judicial organ, since it is technical or scientific. However, the fact that a dispute has political, economic, technical or scientific aspects does not detract from its characterization as a legal dispute 'capable of being settled by the application of rules of international law' *(Wall case; Nicaragua v Honduras; Hostages in Iran; Lauterpacht, The Function of International Law)*. The *Indus Waters* Arbitration reinforces this point, and shows that international tribunals are equipped to deal with legal disputes that are heavily dependent on scientific, engineering or technical data, such as environmental disputes *(e.g. Whaling; Pulp Mills; Ecuador v Colombia)*.

5. Moreover, the *Indus Waters* Arbitral Tribunal was a hybrid tribunal in terms of its composition (in contrast to the ICJ). and from ICJ cases where scientific data and questions were an important part of the dispute: the *Pulp Mills case* where the parties used experts as counsel, and the *Whaling case* where the ICJ resorted for the first time to scientific evidence provided for by experts appointed by the parties according to Article 63 of Court's Rules. According to the arbitration clause, the

Tribunal comprised jurists and an engineer. This composition may have allowed the Tribunal to deal in depth with the scientific and expert evidence received from the parties. But, at the same time there is no evidence that this composition has transformed the judicial function of the tribunal. Rather, this experience may illustrate how the composition of special arbitral tribunals in specialized areas assists in improving the understanding of the technical aspects of the legal dispute (e.g. specialized arbitral tribunal under Annex VIII of LOSC for disputes concerning fisheries, marine environment, marine scientific research and pollution by vessels or dumping).

6. *Third*, disputes concerning international watercourses provide some evidence of the continued dialogue between the International Court of Justice and international arbitral tribunals, but most importantly the dialogue between the International Law Commission and the ICJ, and Arbitral Tribunals. In *Gabcikovo-Nagymaros* the ICJ referred to the ILC Draft Articles on State Responsibility that had not been finalized at the time of the dispute, and the Convention on Non-Navigational Uses of International Watercourses, which had been drafted by the ILC. And in Indus Waters a member of the Commission was a member of the Arbitral Tribunal.