

Transboundary Hydropower Projects Seen Through the Lens of Three International Legal Regimes—Foreign Investment, Environmental Protection and Human Rights

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Recent years have witnessed a growing interest in hydropower. Many countries now see hydropower as a ‘cheap and clean’ alternative to fossil fuels, and therefore an important strategy in addressing climate change. However, much of the world’s hydropower potential is situated in transboundary rivers where existing cooperative arrangements are weak. These river basins are heavily reliant on ‘out of basin’ principles for water sharing. A set of substantive and procedural laws has evolved under customary international law to determine the rights and obligations of States sharing these transboundary rivers. Two further ‘out of basin’ legal regimes are also likely to have an important bearing on transboundary hydropower projects, namely laws concerning foreign investments, and laws protecting the interests of local communities. To date, there has been limited analysis of the linkages between these different regimes, and no study that has considered their relationship within the context of transboundary hydropower. This paper demonstrates that there are critical intersections to be made. These intersections provide important opportunities to explore how these three legal regimes can be implemented in a mutually reinforcing manner.

Keywords: hydropower, international law, investment, environmental protection, human rights

1. Introduction

Recent years have witnessed a growing interest in hydropower, which is seen by some to be a ‘cheap and clean’ alternative to fossil fuels (Kaygusuz, 2004; World Wildlife Fund [WWF], 2004). Hydropower currently provides approximately 16 per cent of global electricity supplies. Additionally, an estimated 80 per cent of hydropower potential is untapped (International Energy Agency [IEA], 2012a). Significant growth is likely in non-OECD countries where the majority of hydropower potential exists, and the challenges of energy security are most pressing (IEA, 2010). It is estimated that these countries will see a 90 per cent increase in hydropower production between 2010 and 2035 (IEA, 2002b).

Many proposed hydropower developments are located on rivers that cross sovereign borders. A total of 148 countries include territory within one or more transboundary river basins, which account for 46 per cent of the globe’s surface; and around 60 per cent of total

global freshwater flow (UN-Water, 2013; Wolf, Natharius, Danielson, Ward, & Pender, 1999). Almost two-thirds of these rivers lack any type of cooperative arrangement at the basin level and national governance systems are often weak (Agrast, Botero, Martinez, Ponce, & Pratt, 2012; United Nations Environment Programme [UNEP], Food and Agriculture Organization, & Oregon State University, 2002; UN-Water, 2008). An added complication is that the energy generated by transboundary hydropower projects often feeds demand outside a particular river basin. For example, 50 percent of the electricity generated by the Inga III hydropower project on the Congo river in the Democratic Republic of Congo, will be sent to South Africa via Zambia and Zimbabwe (Misser, 2013). Effective cooperation between States through the appropriate transboundary governance mechanisms will therefore be an important prerequisite to realising the potential of any hydropower development.

The need for cooperation over transboundary hydropower projects is also compelling given the potential impacts that might arise from such developments, and the likely conflicts that may ensue (Goldsmith & Hildyard, 1986; Millennium Ecosystem Assessment [MEA], 2005; Postel & Richter, 2003; Scudder, 2005; World Commission on Dams [WCD], 2000; WWF, 2004). In summarizing the main impacts, Nilsson, Reidy, Dynesius, and Revenga (2005, p. 405), observe that,

Inundation destroys terrestrial ecosystems and eliminates turbulent reaches, disfavoring lotic biota. It can cause anoxia, greenhouse gas emission, sedimentation, and an upsurge of nutrient release in new reservoirs. Resettlement associated with inundation can result in adverse human health effects and substantial changes in land use patterns. Flow manipulations hinder channel development, drain floodplain wetlands, reduce floodplain productivity, decrease dynamism of deltas, and may cause extensive modification of aquatic communities. Dams obstruct the dispersal and migration of organisms, and these and other effects have been directly linked to loss of populations and entire species of freshwater fish.

Nilsson et al. (2005), go on to suggest that dams already affect almost 60 per cent of the world's large river systems.

The need for effective governance arrangements to be in place is critical given the numerous actors that are involved in transboundary hydropower projects. Governments play a key role but are seldom homogenous. National and provincial government departments and officials will have roles and responsibilities for the planning, construction, operation and monitoring of hydropower projects. These departments and officials are likely to have varying, and perhaps even competing, powers and interests. Coordination between national government departments and provincial government, or between provinces may also be required. Non-governmental organisations that represent communities and/or the ecosystems potentially affected by a hydropower project will also play an important role in major hydropower developments. Such organisations may operate at a local, provincial, national and/or international level. At the international level, a whole host of public and private actors are likely to be involved in any one project, including development and investment banks, foreign governments (as investors), multinational energy and construction companies, law firms, and inter-governmental and non-government organisations.

A further factor that must be taken into account when studying transboundary hydropower projects, and the primary focus of this paper, is that a suite of rules and principles of international law are likely to apply to the interactions between the above-mentioned actors concerning any transboundary hydropower development.

Firstly, human rights law has evolved to protect the interests of individuals that may be affected by any planned projects. Secondly, international investment law has developed in order to protect the rights of foreign investors vis-à-vis host governments. Thirdly, a set of legal norms have evolved regarding State responsibility for environmental protection of transboundary rivers and the sharing of natural resources between States.

Both scholars and policy makers have begun to examine how coordination between these different legal regimes could be improved (Dupuy, 1999; International Law Commission [ILC], 2006). A growing body of literature has explored the relationship between international laws concerning foreign investments and environmental protection (Benedetto, 2013; Dupuy & Viñuales, 2013; Viñuales, 2012; Wälde & Kolo, 2001); human rights and foreign investment (Dupuy, Petersmann, & Francioni, 2009); and human rights and the environment (Boyle & Anderson, 1996; Greiber, 2009). There has also been a large body of work that has examined the relationship between human rights and access to water (Gleick, 1999; McCaffrey, 2005; Salman & McInerney-Lankford, 2004; UN Committee on Economic, Social and Cultural Rights [UNCESCR], 2002; UN General Assembly Resolution, 2010); and laws relating to State responsibility for the environmental protection of transboundary rivers and the sharing of natural resources (McCaffrey, 2007; McIntyre, 2007; Wouters, 1997).

A more limited collection of work has sought to explore linkages between water resources and international investment law (Brown Weiss, 2005; Costamagna & Sindico, 2010; Daza, 2009; Viñuales, 2012, pp. 158–188). However, despite the significant number of rivers that are transboundary, most studies focus on domestic water issues. There are very few scholarly contributions that have examined transboundary rivers vis-à-vis investment law and/or human rights law. Notable exceptions include the work of Bulto (2013) on the extraterritorial application of the right to water in Africa, and McCaffrey's (2005, pp. 112–114), work on the right to water more generally. However, both the work of McCaffrey and Bulto primarily focuses on access to water. What is lacking from the literature is an analysis of the linkages between broader transboundary water resource management issues, and the three areas of international law noted above, which can be simply categorised as human rights, investment and environmental protection.

This paper therefore attempts to address this knowledge gap by examining these three legal areas within the context of transboundary hydropower projects, and suggesting how a combined approach to their interpretation and implementation might strengthen existing governance arrangements.

In order to provide a better sense of the characteristics and significance of transboundary hydropower projects, the following section will offer a snapshot of some key developments. The paper will then provide an explanation of the three key areas of international law, both in terms of the key institutions responsible for their development and

implementation, and their most salient rules and principles. Critical intersections between the three areas will then be ascertained with a view to examining how a 'joined up' approach to their development and implementation might be fostered. The paper concludes by maintaining that more scholarly and policy-driven work is required to exploit the critical intersections between the three legal areas, especially given the growing interest in transboundary hydropower across the world.

2. Transboundary Hydropower Projects

While a comprehensive survey is beyond the scope of this paper, a number of examples of transboundary hydropower projects can be offered in order to highlight some of the key issues faced in their implementation.

Various projects illustrate the point that States have been able to adopt cooperative arrangements over their transboundary rivers. For example, the Itaipú Hydroelectric Power Project – the largest hydropower project in the world in terms of annual energy generation – reflects an outcome of cooperation between two sovereign States (Brazil and Paraguay) on the Paraná transboundary river. Pursuant to a bilateral treaty adopted by Brazil and Paraguay in 1973, a bi-national entity was established for the, 'hydroelectric utilisation of the water resources of the Paraná River owned in condominium by the two countries', and the electricity generated by the project has subsequently been shared to the mutual benefit of both States (Brazil–Paraguay Treaty, 1973).

Cooperation between Canada and the United States is often presented as another positive example of the benefits of cooperation between sovereign States (Tarlock & Wouters, 2007). The 1964 Columbia Treaty gives Canada the right to store water behind upstream dams for flood control and hydropower generation. Canada is compensated US\$64 million for flood control by the US, in addition to being provided with hydroelectricity (valued at US\$350 million) from dams situated on the US side of the Columbia river.

Such benefit sharing arrangements have also been a feature of transboundary hydropower projects in Africa. For instance, the Lesotho Highlands Water Project, generates electricity for Lesotho, which is then sold to South Africa (Ensor, 2013). Similarly, the joint development of the Diama and Manatali Dams, which was made possible through the establishment of a joint institution - *Organisation pour la Mise en Valeur de Fleuve Sénégal* (OMVS) in 1972 - provides benefits for Mauritania, Mali and Senegal (Hensengerth, Dombrowsky & Scheumann, 2012).

These select examples demonstrate that transboundary hydropower projects can lead to greater cooperation between riparian States, and – compared to unilateral action – can result in increased benefits 'from a river' (Sadoff & Grey, 2002). The development of hydropower, and energy more generally, can also act as an important catalyst for regional integration. Examples include the East African Power Pool that was agreed upon by Energy Ministers of Burundi, Democratic Republic of Congo, Egypt, Ethiopia, Kenya, Rwanda and Sudan in 2005 (SNC-Lavalin & Parsons Brinckerhoff, 2011). More recently West

African States initiated a similar Power Pool through the United Nations Economic Commission for West African States (Water for Agriculture and Energy in Africa [WAEA], 2008). This initiative has led to an agreement between Guinea, Senegal, Gambia and Guinea Bissau to build two dams on the Gambia River (Water for Agriculture and Energy in Africa, 2008). Power sharing arrangements may also become an important catalyst for regional integration in South Asia. A joint working group between Bangladesh, India and Bhutan has been established to prepare a framework for cooperation on water resources management and hydropower development (Priyo, 2013). Bilateral cooperation already takes place within the region. For instance, an agreement was signed between India and Bhutan on hydropower cooperation in 2006, and a subsequent protocol to the agreement, signed in 2009, commits India to develop 10,000 MWs of hydropower in Bhutan for export to India (Press Information Bureau, 2011). Several large projects are also being planned by Nepal, which would generate electricity for domestic use, and export to India and China – although it should be noted that the implementation of existing arrangements between India and Nepal have not been without their difficulties (Biswas, 2008).

While transboundary hydropower projects, existing and planned, can therefore promote cooperation they will inevitably also lead to conflict, and a number of ‘hotspots’ exist. Ethiopia’s diversion of the Blue Nile in order to construct the 6,000 MW Grand Ethiopian Renaissance Dam near the border with Sudan has led to tensions with Egypt, which has resulted in the States establishing a tripartite expert group tasked with examining the likely impacts of the project (Schwartzstein, 2013).

In Central Asia, Tajikistan’s plans to build the world’s tallest dam, the Rogun Dam, on the Vakhsh River, a tributary of the Amu Darya River, has faced opposition from downstream neighbour, Uzbekistan (Forbes, 2013). Another example of tension between Central Asian States can be seen on the Syr Darya River, which is shared between Kyrgyzstan, Uzbekistan, Tajikistan and Kazakhstan. Prior to the break-up of the Soviet Union the Toktugul dam, commissioned in 1974 on the Naryn River, a tributary of the Syr Darya River, was centrally managed to support irrigated agriculture in Uzbekistan and Kazakhstan and hydropower generation which went to the Central Asian Energy Pool. Following the break-up of the Soviet Union, Kyrgyzstan, Uzbekistan and Kazakhstan have sought to find an effective agreement on the balance between upstream electricity generation and downstream agricultural needs (Antipova, Zyryanov, McKinney, & Savitsky, 2002; Bernauer & Siegfried, 2008). Negotiations are complicated by future plans to develop the hydropower potential in the region. For example, in September 2012, Russia – an ‘out of basin State’ - and Kyrgyzstan signed an agreement to build a series of hydropower stations worth an estimated US\$350 million (Uznews, 2013).

In South-east Asia, downstream States of the Mekong have expressed concern over the impacts of dams upstream in China for decades. While an agreement was adopted in 1995 for the Mekong River, China is not party to it. Even the parties subject to the 1995 Mekong Agreement have found it difficult to reconcile their interest in hydropower developments both on the tributaries and more recently the mainstream of the Mekong River, such as the Xayaburi Hydroelectric Project (Economist, 2013).

Europe has also been home to a number of disputes over planned hydropower developments. For example, an arbitral tribunal eventually decided a dispute between France and Spain over the development of Lake Lanoux in 1957 (Lake Lanoux Arbitration, 1957). More recently, the International Court of Justice decided a case between Hungary and Slovakia regarding the Gabčíkovo-Nagymaros dam project (International Court Justice [ICJ], 1997).

Another recent case that was heard by an international arbitration, the Permanent Court of Arbitration, involved a dispute between India and Pakistan concerning a transboundary hydropower projects on the Indus River (Permanent Court of Arbitration [PCA], 2013).

Ultimately, the above examples show that regardless of whether cooperative arrangements are in place, disagreements over existing and planned transboundary hydropower developments are inevitable. The need to have effective dispute avoidance and dispute settlement mechanisms in place to resolve any differences will therefore be an important feature of any development.

The need for effective dispute avoidance and settlement mechanisms is particularly pertinent given the numerous plans to develop hydropower on transboundary rivers. For example, plans to develop four dams on the Madeira river, a tributary of the Amazon shared between Brazil and Bolivia, has resulted in tensions between the two countries. The scheme, which has received technical and financial support to the sum of US\$20 billion from the Andean Development Corporation, the Inter-American Development Bank, Fonplata and the United Nations Development Programme, is the largest in a series of bi-national projects that form part of the Initiative for the Integration of Regional Infrastructure Project in South America [IIRSA] (2013). Brazil and Argentina also have plans to construct a bilateral hydropower project on the Uruguay River. The so-called Garabí-Panabí complex would consist of two 1.1 GW dams. The cost of the project, which is financed by both governments and the Inter-American Development Bank, is expected to be US\$4.8bn. Construction of Garabí-Panabí is expected to start in 2015 and last five years (BN Americas, 2012). In addition, Argentina and Paraguay have plans to exploit the potential of the Paraná river downstream of Itaipú. Other projects include expansion of the 3,200 MW Yacyreta Dam and proposals for the 2,880 MW Corpus Christi Dam (Hydro-world, 2007, 2008; IISRA, 2013). Bilateral cooperation between Argentina and Uruguay, on the Uruguay River, has also led to the construction of the 1,890 MW Salto Grande Hydropower plant, which has been generating power since 1989 and recently received finance from the Inter-American Development Bank to undergo enhancements.

In Africa, as noted above, the Democratic Republic of Congo recently announced that it was commencing the first phase of the Inga III hydropower scheme on the Congo river. A treaty has been signed between the Democratic Republic of Congo and South Africa for the joint development of the project (worth US\$40 billion), and South Africa will receive over 50 per cent of the electricity generated – although agreement on transmission lines will also have to be secured from Zambia and Zimbabwe (Misser, 2013). Positive signs of cooperation on the Nile can be seen in plans for a trilateral project between Burundi,

Rwanda and Tanzania to develop the Rusumo Falls Hydropower Scheme, which is financed by the World Bank, the African Development Bank and others (World Bank, 2013). New joint schemes are also planned between Zambia and Zimbabwe on the Zambezi River (Regional Investment Agency [RIA], 2013), Angola and Namibia on the Cunene River (Baynes, 2013; British Broadcasting Corporation [BBC], 2007), and Togo and Benin on the Mono River (Hydroworld, 2009).

In South-east Asia, numerous transboundary hydropower projects are also taking place. In addition to the Mekong example above, China and Myanmar are involved in joint projects on the Salween or Nu River. Whilst Chinese companies are involved in construction of the Myitsone Dam in Myanmar, which was suspended in 2011 following protests (Irrawaddy, 2013). Thailand also has plans to develop five dams together with Myanmar.

While the above examples of transboundary hydropower projects are far from being exhaustive, they show that many governments are looking to transboundary rivers in order to meet their energy needs.

3. The Influence of Three ‘Out of Basin’ Legal Regimes

3.1. International Law of Transboundary Rivers and Environmental Protection

When the interests of States over a transboundary river are in competition international law will apply. International law governing the relations of States concerning their transboundary rivers has developed through a myriad of legal sources including treaties and other State practice, decisions of courts and tribunals and the work of governmental and non-governmental expert groups. A significant contribution has been made by the International Law Commission (ILC), which developed a draft text on the law of the non-navigational uses of international watercourses in 1994. This draft text formed the basis for the Convention on the Law of the Non-navigational Uses of International Watercourses (1997 UN Watercourses Convention), which recently entered into force. This global framework instrument provides an authoritative statement of customary international law in the field (McCaffrey, 2013).

International law relating to transboundary rivers and environmental protection is founded upon the theory of limited territorial sovereignty, which stipulates that States have both the right to exploit natural resources within their jurisdiction, and the obligation to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of their national jurisdiction (Schrijver, 1997).

Within the context of transboundary rivers two key substantive legal principles have evolved in order to give expression to the theory of limited territorial sovereignty, namely equitable and reasonable use, and no significant harm. The principle of equitable and reasonable utilisation requires that where there are competing interests between States concerning the uses of a transboundary river, such interests must be reconciled on the basis of equity or fairness (1997 UN Watercourses Convention, Art. 5). In reconciling their

competing interests States should, pursuant to the principle of equity, seek to maximise the benefits of a transboundary river in a sustainable manner. Inherent in the principle of equity is therefore the requirement to protect the long-term viability of a transboundary river, which is also reflected within many watercourse treaties by the obligation to protect the ecosystems of transboundary rivers (McIntyre, 2007). As a complement to the principle of equitable and reasonable utilisation, the principle of no significant harm requires that States take all appropriate measures to prevent significant harm to other watercourses States (1997 UN Watercourses Convention, Art. 7). Such harm would include detrimental impact of some consequence upon the environment or the socio-economic interests of the harmed States.

Procedural norms governing the relations between States over transboundary rivers offer an important means by which to implement the aforementioned substantive commitments. As an important bridge between substantive and procedural norms, international law imposes a general obligation on States to cooperate over their international watercourses (Leb, 2013). Pursuant to this general obligation, States are encouraged to enter into watercourse agreements and establish joint institutions for the management of their transboundary rivers. Additional procedural rules include the duty to notify and consult over planned measures, the obligation to conduct transboundary environmental impact assessments, the duty to exchange data and information, and the requirement to settle disputes in a peaceful manner.

3.2. International Investment Law

While no multilateral investment treaty exists, most of the applicable law can be found in regional agreements, such as the North America Free Trade Agreement (NAFTA), and over 2,000 bilateral investment treaties. In essence, the rules contained within these regional and bilateral investment treaties are designed to protect the foreign investors, and guard against some of the political risks that are associated with large-scale investments. Dispute settlement procedures are an important feature of most regional and bilateral investment treaties. Through such provisions foreign investors are provided with assurances that a neutral third party will hear any dispute, and they will therefore not be subject to potential impartiality that may arise through any host State judicial system. A key institution in this regard is the International Centre on the Settlement of Investment Disputes (ICSID), which was established in 1965 under the auspices of the World Bank to foster the settlement of disputes between foreign investors and host States (ICSID, 1965). International arbitral tribunals convened pursuant to ICSID, have made a significant contribution to the development of jurisprudence in the field of international investment law (Boisson de Charzornes, 2005).

A number of key principles appear in regional and bilateral investment treaties. The 'national treatment' and 'most-favoured-nation' principles oblige a host State to apply the same level of treatment to a foreign investor as it applies to its own nations, and other foreign investors. In addition, the principle of 'fair and equitable treatment' requires the

host State to treat foreign investments with a minimum standard of fairness irrespective of the standard it applies to domestic investments under national law. Foreign investors are also often afforded, ‘full protection and security’, through bilateral investment treaties, whereby the host State must take steps to protect foreign investors from the conduct of third parties. Another important principle found in investment treaties is the obligation on host States not to expropriate or nationalise foreign investments unless justified on the limited grounds of ‘public purpose’; even where expropriation or nationalisation is justified host States are usually under an obligation to provide adequate compensation to the foreign investor.

3.3 *International Human Rights Law*

The fundamental rights of individuals are set out in the 1948 Universal Declaration of Human Rights, which while not a binding treaty is considered an authoritative statement of customary international law in the field. At the international level two multilateral treaties have been adopted to supplement the Universal Declaration of Human Rights, namely the 1966 International Covenant on Civil and Political Rights and the International Covenant on Economic, Social and Cultural Rights. More specific global human rights instruments have been adopted on issues concerning genocide, refugees, racial discrimination, discrimination against women, torture, children, migrant workers and their families, disabilities and enforced disappearance. In addition, regional instruments have been adopted including the 1981 African Charter on Human and People’s Rights, the 1969 American Convention on Human Rights, and the 1950 Convention on Human Rights. An important feature in the evolution of international human rights law has been the development of jurisprudence concerning the interpretation of global and regional instruments through the work of regional courts, such as the European Court of Human Rights, the Inter-American Court on Human Rights and African Court of Human and People’s Rights, as well as the work of institutions such as the UN Human Rights Council, and the UNCESCR.

While water is not directly covered in either the Universal Declaration on Human Rights or the International Covenant on Economic, Social and Cultural Rights, both instruments provide an explicit right to an adequate standard of living for health and well-being. It could be implied that access to water is a vital component in ensuring a standard of living adequate for health and well-being, and is therefore implicit in this more general right. Other human rights instruments provide a more explicit reference to water, including the 1979 Convention on the Elimination of All Forms of Discrimination Against Women (Article 14(2)(h)), the 1989 Convention on the Rights of the Child (Article 24(2)(c)); and the 1999 UNECE Protocol on Water and Health (Articles 5(m) and 9(1)(b)). The right to water was also affirmed in UN General Assembly Resolution 64/292 in 2010.

In 2002 the UN Committee on Economic and Cultural Rights adopted General Comment 15 on the Right to Water, which was designed to interpret the right to a standard of living adequate for health and well-being, and the right to health contained in Articles 11 and 12 of the 1966 Covenant on Economic, Social and Cultural Rights.

General Comment 15 (GC15) stipulates that, ‘the human right to water entitles everyone to sufficient, safe, acceptable, physically accessible and affordable water for personal and domestic uses’ (UNCESCR, 2002, p. 2).

The so-called ‘Right to Water’ gained further support through the adoption of a UN General Assembly Resolution (2010), which recognised that, ‘the right to safe and clean drinking water and sanitation as a right ...essential for the full enjoyment of life and all human rights’.

4. Critical Intersections between Legal Regimes

The previous section has demonstrated that there are three distinct areas of international law that enjoy their own specific rules and principles, as well as separate instruments and institutions. The question that remains to be addressed is whether there are linkages between the three, and more specifically, how any linkages might relate to transboundary hydropower projects.

4.1. Procedural Aspects of the Obligation to Prevent Transboundary Harm

A number of critical intersections arise from the State’s obligation to take all appropriate measures to prevent significant harm to another riparian State, which places States under a ‘due diligence’ obligation (Rieu-Clarke, 2005, pp. 63–65). In commenting on this obligation, the ILC (1994, p. 103) suggested that,

... a watercourse States whose use cause significant harm can be deemed to have breached its obligation to exercise due diligence so as not to cause significant harm only when it has intentionally or negligently caused the event which has to be prevented or has intentionally or negligently not prevented others in its territory from causing that event or has abstained from abating it.

The above statement makes it clear that States will be responsible for activities of ‘others in its territory’, including actions of foreign investors involved in hydropower projects. Such an obligation would require States to adopt certain legal, administrative, economic, financial and technical measures by which to regulate the conduct of non-State actors in order to prevent significant harm.

Cooperation between hydropower companies and States will be important in defining the appropriate due diligence obligation that a State might be subject to. On the key elements of due diligence, the ILC (1999, para. 31), has commented that,

The degree of care in question is that expected of a good Government. In other words, the Government concerned should possess, on a permanent basis, a legal system and material resources sufficient to ensure the fulfilment of its international obligations. To that end, the State must also establish and maintain adequate administrative apparatus. However, it is understood that the degree of care expected of a State with well-developed economic, human and material resources and with highly evolved systems and structures of governance is not the same as for States which are not in such a position.

Codes of conduct and industry standards, which traditionally fall under the remit of international investment law, may help to shape, or determine, what ‘degree of care’ may be appropriate to any given State. Instruments such as United Nations Global Compact, the OECD Guidelines on Multinational Enterprises, or the International Labour Organisation’s Tripartite Declaration of Principles Concerning Multinational Enterprises and Social Policy encourage States to adhere to international agreed standards concerning environmental protection, human rights and so forth (ILO, 2006; Organization for Economic Cooperation and Development [OECD], 2011; United Nation, 2013). Industry-specific codes of conduct are also increasingly prevalent. In the hydropower sector for instance, the International Hydropower Association’s (IHA) Hydropower Sustainability Assessment Protocol has become an important tool to measure and guide performance in the hydropower sector (IHA, 2010). These instruments offer important mechanism by which to support the implementation of legal standards, such as obligations to ‘take all appropriate measures’ not to cause significant harm, conduct stakeholder consultations, and carry out transboundary EIAs. More could perhaps be done to harmonise these standards across countries and regions.

In addition, two key regulatory mechanisms are likely to be particular pertinent when ascertaining the transboundary impact of hydropower projects, namely stakeholder consultation and environmental impact assessment. Both mechanisms require close cooperation between States, and the non-State actors involved in, or affected by, transboundary hydropower projects. These two mechanisms are therefore discussed in further detail below.

4.2. *The Obligation to Conduct Transboundary Environmental Impact Assessment*

International law places States under an obligation to provide notification of any planned measures that may have a significant adverse effect on other riparian States (1997 UN Watercourses Convention, Art. 12). Such notification, according to Art. 12 of the 1997 UN Watercourses Convention, must be ‘accompanied by available data and information, including the results of any environmental impact assessment’.

In the Pulp Mills Case between Argentina and Uruguay regarding Pulp Mills on the Uruguay River, the International Court Justice (ICJ) went further by suggesting that general international law imposes a requirement upon States to conduct a *transboundary* environmental impact assessment (EIA) (ICJ, 2010). However, in the latter case, the ICJ (2010, para 205), suggested that,

... it is for each State to determine in its domestic legislation or in the authorization process for the project, the specific content of the environmental impact assessment required in each case, having regard to the nature and magnitude of the proposed development and its likely adverse impact on the environment as well as to the need to exercise due diligence in conducting such an assessment.

The regional 1991 UNECE Convention on Impact Assessment in a Transboundary Context goes further by stipulating what should be included in an EIA. Development Banks also tend to prescribe the scope and content of EIAs (World Bank, 1999). Other

examples include the IHA's Sustainability Assessment Protocol (IHA, 2010), and UNEP's Goals and Principles of Environmental Impact Assessment (UNEP, 1987). It could therefore be asked whether further guidance might be offered in terms of the roles and responsibilities of private companies in conducting an EIA, and the requirements placed upon States within a transboundary context. While the ESPOO Convention arguably goes furthest in this regard, it is currently only regional in scope. A particular challenge faced by transboundary hydropower projects is how to ensure that data and information – including stakeholder opinion – is collected and evaluated amongst *all* key stakeholders. This issue is discussed in greater detail in the next section.

4.3. *Stakeholder Consultations*

A closely related requirement to EIA is the need to consult with potentially affected stakeholders concerning any planned measures. Invariably, such a requirement will require coordination amongst the governments and companies planning transboundary hydropower projects, and the communities potentially affected by them. In the Pulp Mills case, Argentina questioned whether there had been sufficient consultation with potentially affected populations during the planning of the Pulp Mills (ICJ, 2010, para 206). Argentina claimed that a legal obligation existed to consult potentially affected populations under the UNECE Espoo Convention, UNEP's Goals and Principles of Environmental Impact Assessment, and the ILC's Draft Articles on Prevention of Transboundary Harm from Hazardous Activities. In response, the Court stated that, 'no legal obligation to consult the affected populations arises on the Parties from the instruments invoked by Argentina' (ICJ, 2010, para. 216). However, while perhaps not relevant given the facts of the Pulp Mills case, linkages can also be made to human rights instruments in this regard. GC15, for example, stipulates that States are under an obligation to prevent third parties from interfering in any way with the enjoyment of the right to water, which in turn requires States to adopt, 'necessary and effective legislative and other measures to restrain, for example, third parties from denying equal access to adequate water; and polluting and inequitably extracting from water resources' (UNCESCR, 2002, p. 9). Arguments could also be made that hydropower development might affect other human rights, such as the right to food. Cambodia and Viet Nam, for instance, has argued that upstream developments on the mainstream of the Mekong may affect fisheries downstream (Orr, Pittock, Chapagain, & Dumaresq, 2012).

Within the context of transboundary hydropower developments these obligations ultimately stress the need of both companies and government to adequately assess the likely impact that any proposed developments might have, and to engage local communities in any plans. GC15 explicitly requires that, 'the right of individuals and groups to participate in decision-making processes that may affect their exercise of the right to water must be an integral part of any policy, programme or strategy concerning water' (UNCESCR, 2002, p. 11). This requirement to engage with potentially affected individuals and groups is supported in other international instruments such as the 1992 Rio Declaration (principle 10), Agenda 21, the 1992 Dublin Statement on Water and Sustainable Development, the 2001

Bonn Recommendations for Action, the 2002 World Summit on Sustainable Development, the 2000 World Commission on Dams report (Woodhouse, 2003). In addition, the World Commission on Dams Report suggested that, where a project might affect indigenous groups the principle of 'free, prior and informed consent should apply' (WCD, 2000). Such a principle finds significant support within international agreements, policies and human rights case law (Cullet & Gowlland-Gualtieri, 2005).

4.4. *Equity and the Right to Water*

A further intersection relates to the right to water and the principle of equitable and reasonable utilisation. GC15 stipulates that, 'any activities undertaken within the State party's jurisdiction should not deprive another country of the ability to realise the right to water for persons in its jurisdiction' (UNCESCR, 2002, p. 11). This statement would therefore place States under an obligation to ensure that transboundary hydropower developments do not interfere with the enjoyment of the right to water in another State.

Article 10 of the UN Watercourses Convention links to such an obligation by stipulating that, any conflict between uses of an international watercourse should be resolved on the basis of equity, with 'special regard being given to the requirements of vital human needs'. 'Vital human needs' is defined in a Statement of Understanding to the UN Watercourses Convention as being, 'sufficient water to sustain human life'. Parallels may therefore be drawn between this definition of 'vital human needs' and the description of the right to water for 'personal and domestic uses', as contained in General Comment 15 (Rieu-Clarke, 2005, pp. 115–120).

However, couching this obligation within the context of the human right to water raises questions over human rights obligations of an extraterritorial nature. Could, for example, an upstream State be held responsible for a breach of an individual's right to water in a downstream State, if the upstream State's storage of water meant that there was insufficient water to meet personal and domestic water uses in the downstream State? If so, who and where might a right be upheld? No conclusive statement or case law has decided this point, although it has been discussed in scholarly writings (Bulto, 2011; McCaffrey, 2005).

4.5. *Environmental Protection versus Investor Protection*

Large-scale infrastructure partnerships between private investors and public utilities tend to be based on concession contracts, which guarantee a rate of return for the investor over a certain period of time. These investments are often premised on so-called 'stabilisation' or 'umbrella' clauses, which seek to protect the commitment that was made to the foreign investor at the time of the contract, and therefore guard against future changes, such as legislative or regulatory advances. The legal validity of such clauses are hotly debated, however, the implications of such a clause might be considerable (Sornarajah, 2010). In the hydropower sector such concessions are typically given for 15 to 25 years, in addition to the period required to develop the project (Head, 2011). Governments around

the world are therefore faced with the dilemma of negotiating hydropower concession that will last, in some cases to 2040 and beyond (Head, 2011). When it comes to transboundary hydropower a number of issues might arise due to such long-term planning. Guaranteeing sufficient water for a particular hydropower project may be difficult. In the transboundary context, upstream developments, or downstream demands, may require States to reallocate water resources amongst different users, and potentially across sovereign borders. Additionally, the impacts of climate change may alter the amount of water that is available within a particular river basin. Advances in knowledge and understanding might also require changes in the way hydropower schemes operate. Examples already exist of hydropower projects that have been altered due to changes in policy, such as the restoration of environmental flows – or in some cases even the decommissioning of dams (Krchnak, Richter, & Thomas, 2009; Richter & Thomas, 2007). These difficulties in predicting the dynamic nature of water resources are likely to cause challenges for States and foreign investors when they seek to define their contractual relationships. Here, international investment law plays a role in providing foreign investors with certain assurances, through principles related to national treatment, most-favoured-nation, fair and equitable treatment, full protection and security, and expropriation.

In the context of transboundary rivers, the application of some of these principles requires careful consideration. For example, the principle of full protection and security has tended to be invoked to protect the rights of investors due to physical actions, such as damage caused by armed conflicts (ICSID, 1990, 1997). Some more recent cases have adopted a more expansive interpretation of security to encompass commercial and legal security (ICSID, 2000a, 2006, 2008). These interpretations of security beg the question whether a foreign investor might make a case against a host State due to the actions of another riparian State? For example, where the actions of an upstream State affect a downstream hydropower development, could a private investor in that development claim that the host State had not protected their interests? In turn, might this scenario lead to States negotiating more rigid provisions in their transboundary river agreements, and/or explicitly requiring water security to be taken into account. In this regard, the discussion concerning the inclusion of a water security provision in the Nile Basin Cooperative Framework Agreement are particularly pertinent (Abseno, 2013; Mekonnen, 2010).

A further example of important linkages might relate to the way in which expropriation is interpreted. Generally, expropriation of any foreign investments by the host States can only be justified in limited circumstances related to ‘public purpose’. Such expropriations must also be non-discriminatory and compensation should be paid to the foreign investor. However, expropriations have tended to be defined and applied quite broadly. Firstly, all rights and interests of a foreign investor that have monetary value can be considered (Liamco, 1978). Secondly, the impact of a government action will be the key determinant, rather than its intent or form. In the *Metaclad v. Mexico* case this meant that the enactment of environmental regulations that prevented the implementation of a project to build and operate a landfill amounted to an ‘indirect expropriation’ (ICSID, 2000b). Such an approach has been criticised by environmentalists as it might deter governments from

enacting stronger environmental regulation, or agreeing to be bound by further international environmental commitments. Subsequent rulings and definitions in investments treaties have sought to offer more clarity and restrict the application of this so-called 'indirect expropriation'. Wälde and Kolo (2001, p. 814) suggest that the notion of indirect expropriation would not apply to, 'a legitimate, proportionate and non-discriminatory measure, which did not render the foreign investor's property rights economically useless, nor was imposed in clear violation of a prior commitment'. However, within the context of transboundary hydropower projects, issues may arise where States wish to adopt more stringent environmental flow requirements at a national level, or States party to basin-specific or regional watercourse agreements are inclined to adopt stronger environmental regulations. Each of these issues requires careful consideration within the specifics of any given case. However, it is clear from this brief overview that there are important connections between these different legal regimes, and more attention should be given to deepening such understanding in order to avoid conflicts and promote synergies between legal regimes.

4.6. *Institutional Co-Ordination*

A more general linkage between the legal regimes applies to the different institutions that are responsible for the development, adoption, interpretation and enforcement of the law relating to human rights, environmental protection and investment. A few examples will serve to highlight where critical intersections might arise.

Firstly, in the NAFTA case of *Bayview v. Mexico* (ICSID, 2007) a group of Texan farmers brought the case before an ICSID tribunal on the basis of Mexico's impoundment of the waters of the Rio Grande, which they alleged was in breach of the 1944 Treaty between United States and Mexico. The Texan farmers claimed that under the 1944 Treaty, Mexico had relinquished ownership of the claimants' irrigation water. These rights had accordingly been transferred from Mexico to the United States in 1944, and then from the United States to the claimants pursuant to national law (ICSID, 2007, p. 11). The tribunal was however reluctant to follow this line of argument, and suggested that any potential breach of the 1944 US-Mexico Treaty,

'would be a matter for the two States, who are the only Parties to that Treaty. If the interests of US nationals were thought to be prejudiced by any actions alleged to amount to a violation of the Treaty, that is an issue which could be taken up by the US Government under the dispute resolution procedures in the 1944 Treaty. But the 1944 Treaty does not create property rights amounting to investments within the meaning of the NAFTA which US national [sic] themselves may protect by action under NAFTA...' (ICSID, 2007, p. 26).

The tribunal's decision provides some useful guidance for foreign investors involved in projects on transboundary rivers. A key message is that the private investor must seek redress or remedy outwith ICSID, and opportunities to hold a third riparian State directly to account in such a venue are likely to be limited at best.

There may however be the option of filing a claim within the State that may have caused the alleged legal injury to a non-State actor located in another State. Article 32

of the UN Watercourses Convention is pertinent in this regard, as it potentially provides, ‘persons, natural or juridical, who have suffered or are under a serious threat of suffering significant transboundary harm as a result of activities related to an international watercourse’, ‘access to judicial or other procedures, or a right to claim compensation or other relief in respect of significant harm caused by such activities carried on in its territory’. However, it should be highlighted here that unlike the UNECE Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters, a regional instrument, Article 32 the UN Watercourses Convention does not provide a right of access to justice of itself, but rather commits the State not to discriminate where, firstly, one exists in domestic law, and secondly, the States concerned have not agreed otherwise.

Bayview v. Mexico also stresses the importance of there being effective cooperation between riparian States on a particular river basin before any transboundary hydropower project takes place. Securing an effective and long-term agreement between riparian States that are either influenced by, or could influence, a particular project becomes crucial.

Secondly, an example of the linkages between foreign investments and international law relating to transboundary rivers can be seen by Pöyry’s role in the Xayaburi Hydropower Project on the Mekong River. Pöyry, a Finnish consultancy company, was commissioned by the government of Laos to conduct a study of the comparison of the original Xayaburi project plan, and recommendations adopted by the Mekong River Commission. A group of 15 non-governmental organisations (NGOs) subsequently filed a complaint to the Finnish Ministry of Employment and the Economy – the OECD national contact responsible for promoting compliance with the OECD Guidelines for Multinational Enterprises. The NGOs maintained that Pöyry did not sufficiently consider the environmental and human rights impacts of the Xayaburi Hydropower Project. The Ministry of Employment and the Economy concluded that Pöyry did not violate the OECD guidelines but recommended that in similar projects companies should assess the risks to the environment and impacts on potentially affected communities more carefully, and act in a more transparent manner (Finnish Government, 2013). While the Xayaburi Hydropower Project has also invoked dispute avoidance procedures at a State-State level (Rieu-Clarke, 2014), and in particular through the Mekong River Commission, this example shows that private companies can also be held accountable for their actions related to the transboundary aspects of a hydropower project. This case of the OECD, also demonstrates the importance codes of conduct for foreign investors (see discussion in section 4.1).

The Xayaburi dispute has also prompted a case to be field in a Thai administrative court by 80 villagers that might be potentially affected by the project. The case challenged the decision of the Thai government to approve the Power Purchase Agreement between the Electricity Generating Authority of Thailand and the Xayaburi Power Company Limited (Earthrights International, 2013). While the court denied jurisdiction to hear the case, this example demonstrates how different venues are being sought to address claims regarding transboundary hydropower projects, and perhaps the frustration of non-State actors in not feeling that an appropriate venue or process exists for their concerns to be heard.

The same dispute has prompted Cambodia to threaten to take Laos to ‘an international court’ if regional agreement is not secured (Radio Free Asia, 2012).

Xayaburi also illustrates the responsibilities that countries may have in regulating the conduct of their companies that are operating abroad. In terms of the right to water, this obligation is explicitly provided for in GC15, which requires States, ‘to prevent their own citizens and companies from violating the right to water of individuals and communities in other countries’ (UNCESCR, 2002, p. 12). This statement raises the question of the extent to which the State in which a company is registered is responsible for actions of a multinational company involved in transboundary hydropower projects in another State.

Thirdly, it is important to recognise that disputes between States over transboundary waters often also affect foreign investors. An illustrative example can be seen by the Pulp Mills dispute between Uruguay and Argentina on the Uruguay River, which also involved Spanish (ENCE), and Finnish (Oy-Metsa Botnia AB) companies, as well as the World Bank. Initial environmental authorisations from the Uruguayan government to build two pulps mills on the Uruguay River were given. There were however significant public protests concerning the impacts of the planned pulp mills in Argentina. Eventually, ENCE pulled out of the project before construction of its pulp mill had been initiated. Various forums heard aspects of the dispute including the World Bank’s Compliance and Advisory Ombudsman, a Mercusor Tribunal, and the ICJ. Ultimately, the ICJ ruled that while Uruguay had failed to comply with certain obligations it had to Argentina, it was not appropriate for damages to be paid or for the mills to be dismantled. Botnia were therefore entitled to continue to operate its mill. However, the case highlights some of the risks involved in developing major infrastructure projects on transboundary rivers.

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