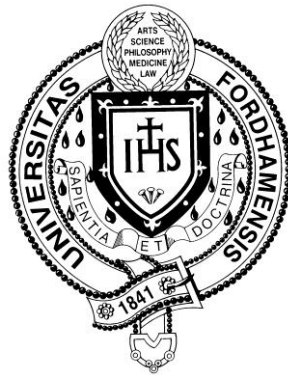


# FORDHAM ENVIRONMENTAL LAW REVIEW



BEYOND EQUITY: SHARED NATURAL RESOURCES AND HUMAN RIGHTS,  
CRIMINAL LAW, AND THE USE OF FORCE

*Eian Katz*

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Eian Katz\*

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ABSTRACT

*Transboundary resource disputes are often analyzed by reference to two nebulous and conflicting principles that have emerged in international environmental law: “equitable and reasonable utilization” and “no significant harm.” Frequently overlooked in this context is the potential value of other canons of international law—especially human rights law, criminal law, and the rules governing the use of force—in adding definition to the muddled contours of these foundational precepts. This Article therefore undertakes an assessment of sovereign rights and obligations regarding shared natural resources which arise from these other bodies of law. In doing so, it offers new lenses through which to evaluate competing state resource claims. It also provides fresh perspective on longstanding controversies in international law relating to extraterritorial jurisdiction, conflict of rights, and non-military attacks or uses of force.*

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## INTRODUCTION

In April 2021, Egypt, Ethiopia, and Sudan returned to the bargaining table for talks related to the Grand Ethiopian Renaissance Dam (“GERD”), the latest episode in a protracted negotiation that has stretched on for nearly a decade. After two days of meetings, the trilateral initiative sputtered and was followed by renewed appeals for international intervention.<sup>1</sup>

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<sup>1</sup> *Egypt, Sudan and Ethiopia Talks Over Nile Dam Fail*, AL JAZEERA (Apr. 6, 2021), <https://www.aljazeera.com/news/2021/4/6/sudan-says-ethiopias-moves-on-nile-dam-violate-international-law>; *Nile Dam Dispute Could be Heading to Security Council*, AL MONITOR (Apr. 30, 2021), <https://www.al-monitor.com/originals/2021/04/nile-dam-dispute-could-be-heading-security-council>.

The GERD is a massive infrastructure project which, upon its expected completion in 2023, promises to more than double Ethiopia's installed energy capacity in a country in which 65 million people lack electricity.<sup>2</sup> In Ethiopia, the dam has been transformed into a national symbol, extolled in song by its most popular musical artist<sup>3</sup> and in verse by its political leaders.<sup>4</sup>

In downriver Egypt and Sudan, by contrast, the outlook is far dimmer. Egypt is particularly dependent upon the Nile—the river supplies 90% of its fresh water<sup>5</sup> and 90% of all Egyptians call its valley home.<sup>6</sup> Already facing a critical water shortage, Egypt believes that that damming the Nile will exacerbate this scarcity and endanger farmland that accounts for two-thirds of its food production.<sup>7</sup> With these grim consequences portended, Cairo has characterized the GERD as an existential threat.<sup>8</sup> Despite the stakes, ongoing efforts to resolve the controversy have repeatedly foundered.

The Nile River is but one example of a resource shared by multiple sovereigns. Throughout the world, many rivers, lakes, aquifers, forests, fish and wildlife populations, and oil, gas, and mineral deposits—not to mention the air we breathe—traverse national borders. Interstate disagreements over the use of these resources is

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<sup>2</sup> U.N. Sec. Council, *Annex to the letter dated 14 May 2020 from the Permanent Representative of Ethiopia to the United Nations addressed to the President of the Security Council* 6, 11, U.N. Doc. S/2020/409 (May 15, 2020).

<sup>3</sup> *Teddy Afro: How Do We Negotiate over the Nile?*, ETHIOPIAN MONITOR (Aug. 4, 2020), <https://ethiopianmonitor.com/2020/08/04/teddy-afro-how-do-we-negotiate-over-the-nile/>.

<sup>4</sup> Max Bearak and Sudarsan Raghavan, *Africa's Largest Dam Powers Dreams of Prosperity in Ethiopia and Fears of Hunger in Egypt*, WASH. POST (Oct. 15, 2020), <https://www.washingtonpost.com/world/interactive/2020/grand-ethiopian-renaissance-dam-egypt-nile/>.

<sup>5</sup> *Egypt to Withdraw from Latest Nile Dam Talks for Consultations*, AL JAZEERA (Aug. 5, 2020), <https://www.aljazeera.com/news/2020/8/5/egypt-to-withdraw-from-latest-nile-dam-talks-for-consultations>.

<sup>6</sup> Magdi Abdelhadi, *Nile Dam Row: Egypt Fumes as Ethiopia Celebrates*, BBC (July 29, 2020), <https://www.bbc.com/news/world-africa-53573154>.

<sup>7</sup> Eric Knecht and Maha El Dahan, *Egypt's Rice Farmers See Rough Times Downstream of New Nile Mega-Dam*, REUTERS (Apr. 23, 2018), <https://www.reuters.com/article/us-egypt-rice-insight-idUSKBN1HU100>; Bearak and Raghavan, *supra* note 4.

<sup>8</sup> *Egypt Warns of 'Existential Threat' from Ethiopia Dam*, AL JAZEERA (June 30, 2020), <https://www.aljazeera.com/economy/2020/6/30/egypt-warns-of-existential-threat-from-ethiopia-dam>.

commonplace; in recent decades, conflict has flared on the banks of the Indus, Mekong, and Tigris and Euphrates Rivers.<sup>9</sup> Climate change only threatens to exacerbate scarcities and competition.

The prominence and gravity of interstate resource disputes notwithstanding, the applicable law remains shrouded in indeterminacy. For more than a century, the Westphalian international system has struggled to accommodate a reality in which resource ownership can be collective rather than exclusive to the territorial sovereign. This effort has resulted in the development of two nebulous and sometimes-inconsistent principles in treaty and customary law. The first is the sovereign right of states to “equitable and reasonable utilization” (“ERU”) of transboundary resources. The second is a reciprocal obligation to cause “no significant harm” (“NSH”) to other states reliant upon the same resource. Lingering uncertainties as to the meaning of these terms and their interrelation has made law an inadequate tool in resolving disputes over shared natural resources.

Much scholarship has been produced attempting to bring clarity to the hazy concepts of ERU and NSH. However, the literature has largely undertheorized the responsibilities of plural resource sovereigns that derive from other sources of public international law. Regardless of their compliance with ERU and NSH, states may not utilize resources in a manner that would violate their other international obligations. This Article suggests that transboundary resource utilization may in fact be limited by international human rights law, international criminal law, and the UN Charter’s general prohibition of the use of force. A fuller realization of these limitations may inform the understanding of ERU and NSH.

At the same time, the transnational character of certain resources challenges bodies of law predicated on fixed state borders. This challenge mirrors that posed by other transboundary threats, like pollution and disease. For these branches of law to remain relevant in a changing threat environment, they must develop responses to these emerging issues. This Article therefore also explores where these responses are needed and what form they might take, with a focus on

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<sup>9</sup> Noa Tann and Madeline Flamik, *Interstate Dam Disputes Threaten Global Security*, AM. SEC. PROJECT (Aug. 2018), <https://www.americansecurityproject.org/wp-content/uploads/2018/08/Ref-0215-Interstate-Dam-Disputes.pdf>.

extraterritorial jurisdiction, conflict of rights, and non-military or non-kinetic attacks or uses of force.

Part I reviews the origins and contested meanings of the two leading precepts governing the usage of shared natural resources: equitable and reasonable utilization and no significant harm. Part II then considers scenarios in which the misuse of transboundary resources may violate international human rights law, international criminal law, or the UN Charter's presumptive ban on the use of force. Part III comments on the implications of this analysis for the management of shared resources and for the evolution of these corpuses of law.

#### I. MURKY WATERS: UTILIZATION AND HARM

Much of international environmental law has been inspired by and shaped in response to “the impact that activities in one territory may have on the territory of another.”<sup>10</sup> As the international community began to turn its attention to the particular issue of natural resources shared between two or more states, it coalesced early on around the idea that one state's usage should not be to the detriment of another state.<sup>11</sup> This basic notion derives from and is sometimes rendered as the Roman Law maxim *sic utere tuo ut alienum non laedas*, or “use your own property in such a way that you do not injure that of others.” During the 20<sup>th</sup> century, “no significant harm” (“NSH”) formed the underlying principle for a raft of subsequent agreements focusing on the conservation of the natural environment.<sup>12</sup>

Along with the responsibility to do no significant harm, international law later came to recognize a corresponding right to development that includes “full permanent sovereignty... over all...

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<sup>10</sup> *Iron Rhine (“Ijzeren Rijn”) Ry. (Belgium v. Netherlands)*, 27 R.I.A.A. 35, para. 222 (Perm. Ct. Arb. 2005), <https://pcacases.com/web/sendAttach/477>.

<sup>11</sup> INSTITUTE OF INTERNATIONAL LAW, INTERNATIONAL REGULATION REGARDING THE USE OF INTERNATIONAL WATERCOURSES FOR PURPOSES OTHER THAN NAVIGATION—DECLARATION OF MADRID 365 (Apr. 20, 1911).

<sup>12</sup> *See, e.g.* U.N. Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, U.N. Doc. A/CONF/164/37, art. 7 (Sept. 8, 1995); Convention on the Conservation of Migratory Species of Wild Animals, art. 5 (June 23, 1979); Convention on Wetlands of International Importance especially as Waterfowl Habitat, art. 4 (Feb. 2, 1971).

natural resources.”<sup>13</sup> The principle of “equitable and reasonable utilization” (“ERU”) was conceived as a means to reconcile the apparent conflict between sovereign rights and sovereign duties respecting resources shared among multiple states. Yet NSH and ERU remain somewhat muddled both in their individual meanings and in their interaction. This Part briefly summarizes the origins of each and the enduring tensions and ambiguities.

#### A. *No Significant Harm*

The common law principle of *sic utere tuo* has been applied extensively in environmental law.<sup>14</sup> In several treaties, it is framed as an absolute duty not to “cause damage to the environment of other states” from activity originating within a state’s jurisdiction or control.<sup>15</sup> In more recent sources, this has been softened to an obligation not to cause “significant harm,” and to mitigate such harm once inflicted.<sup>16</sup> A “significant harm” is one that is more than merely “detectable,” but less intense than a “serious” or “substantial” harm.<sup>17</sup>

When there is a violation of the NSH mandate, relevant treaties and draft conventions impose liability upon states in accordance with

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<sup>13</sup> See G. A. Res. 3281 (XXIX), *Charter of Economic Rights and Duties of States*, art. 2 (Dec. 12, 1974); see also G. A. Res. 41/128, *Declaration on the Right to Development*, art. 1 (Dec. 4, 1986).

<sup>14</sup> T.R. Subramanya and Shuvro Prosun Sarker, *Emergence of Principle of Sic Utere Tuo Ut Alienum Non-Laedes in Environmental Law and Its Endorsement by International and National Courts: An Assessment*, 5 KATHMANDU L. REV. 1, 5–8 (2017).

<sup>15</sup> G. A. Res. 3281 (XXIX), *Charter of Economic Rights and Duties of States*, art. 30 (Dec. 12, 1974); UN Environment Programme, *Draft Principles in the Field of the Environment for the Guidance of States in the Conservation and Harmonious Utilization of Natural Resources Shared by Two or More States*, U.N. Doc. UNEP/GC.6/CRP.2, principle 3.1 (May 19, 1978); Rio Declaration on Environment and Development, U.N. Doc. A/CONF.151/26, principle 2 (Aug. 12, 1992).

<sup>16</sup> See Convention on the Law of the Non-Navigational Uses of International Watercourses, art. 7 (May 21, 1997); Draft Articles on the Law of Transboundary Aquifers, with Commentaries, art. 6, ILC 60<sup>th</sup> Sess. (2008); see also International Law Commission, *Protection of the Atmosphere: Texts and Titles of Draft Guidelines and Preamble Adopted by the Drafting Committee on First Reading*, guideline 3, 70<sup>th</sup> Sess. (June 6 2018).

<sup>17</sup> Int’l Law Comm’n, *Draft Articles on the Law of Transboundary Aquifers, with Commentaries*, U.N. Doc. A/63/10, at 30 (2008).

applicable international law.<sup>18</sup> The pertinent customary rules are compiled in the International Law Commission's ("ILC") Draft Articles on the Prevention of Transboundary Harm from Hazardous Activities, which concern "activities not prohibited by international law which involve a risk of causing significant transboundary harm through their physical consequences."<sup>19</sup> The draft articles describe the subject risk threshold as "a high probability of causing significant transboundary harm and a low probability of causing disastrous transboundary harm."<sup>20</sup> States must take "all appropriate measures" to minimize such risks.<sup>21</sup> According to a complementary set of ILC draft principles, when damage is caused by hazardous activities the responsible state must provide "prompt and adequate compensation to victims."<sup>22</sup>

### B. *Equitable and Reasonable Utilization*

One of the earliest expressions of what would become the ERU principle appears in the 1974 Charter of Economic Rights and Duties of States: "In the exploitation of natural resources shared by two or more countries, each State must co-operate... in order to achieve optimum use of such resources without causing damage to the legitimate interest of others."<sup>23</sup> In draft principles produced by the UN Environment Programme ("UNEP") a few years later, this language is updated to require interstate cooperation "consistent with the concept of equitable utilization of shared natural resources."<sup>24</sup> In various sources, ERU has also been alternately stylized as "optimum" or "sustainable" utilization.<sup>25</sup>

The concept of ERU has been adopted in treaty instruments for many different applications. Certain regional agreements concerning

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<sup>18</sup> G. A. Dec. UNEP/GC.6/CRP.2, principle 12.1 (May 19, 1978); Int'l Law Comm'n, *supra* note 17, at 42.

<sup>19</sup> Int'l Law Comm'n, *Draft Articles on Prevention of Transboundary Harm from Hazardous Activities, with Commentaries*, art. 1, 53<sup>rd</sup> Sess. (2001).

<sup>20</sup> *Id.* art. 2(a).

<sup>21</sup> *Id.* art. 3.

<sup>22</sup> Int'l Law Comm'n, *Draft Principles on the Allocation of Loss in the Case of Transboundary Harm Arising out of Hazardous Activities, with Commentaries*, U.N. Doc A/61/10, at principle 4, 58<sup>th</sup> Sess. (2006).

<sup>23</sup> G. A. Res. 3281 (XXIX), at 3, Charter of Economic Rights and Duties of States (Dec. 12, 1974).

<sup>24</sup> G. A. Dec. 3129, *supra* note 18 (principle 1).

<sup>25</sup> Int'l Law Comm'n, *supra* note 17, at 28.



shared resources, such as the Amazon rainforest or the Colorado, Rio Grande, and Tijuana rivers, mandate a “rational utilization” or an “equitable distribution” of waters among state parties.<sup>26</sup> The UN Convention on the Law of the Sea (UNCLOS) charges coastal states with promoting the “optimum utilization” of living resources within the exclusive economic zones surrounding their shores.<sup>27</sup> ERU has also been incorporated into treaties and draft conventions governing the global usage of specific types of resources, such as migratory fish,<sup>28</sup> transnational waterways,<sup>29</sup> drainage basins,<sup>30</sup> aquifers,<sup>31</sup> and the atmosphere.<sup>32</sup>

The fullest articulation of ERU is given in the Convention on the Law of Non-Navigational Uses of International Watercourses (“UNWC”), which entered into force in 2014. “Equitable and reasonable utilization” is described there as fostering the upstream watercourse state’s “optimal and sustainable utilization..., taking into account the interests of the watercourse States concerned, consistent with the adequate protection of the watercourse.”<sup>33</sup> This characterization illustrates that ERU contains both a right to make productive use of the resource and a restraint on that right. The UNWC drafters explain that “equitable” does not necessarily mean quantitatively equal proportions, but rather qualitatively equal rights

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<sup>26</sup> Treaty for Amazonian Cooperation, art. 5, July 3, 1978, 1202 U.N.T.S. 19194; Utilization of Waters of the Colorado and Tijuana Rivers and of the Rio Grande, art. 16, Mex.-U.S., Feb 3, 1944, T.S. No. 994.

<sup>27</sup> United Nations Convention on the Law of the Sea, art. 62, Dec. 10, 1982, 1833 U.N.T.S. 397.

<sup>28</sup> U. N. Conference on Straddling Fish Stocks and Highly Migratory Fish Stocks, *Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks*, U.N. Doc. A/CONF/164/37, preamble & art. 5 (Sept. 8, 1995) (calling on parties to achieve “optimum utilization” and to avoid “overutilization”).

<sup>29</sup> Convention on the Law of the Non-Navigational Uses of International Watercourses, art. 5, May 21, 1997, G.A. Res. 51/229 [hereinafter *International Watercourses*].

<sup>30</sup> Int’l Law Comm’n, *The Helsinki Rules on the Uses of the Waters of International Rivers*, arts. 4 & 5 (Aug. 1996) [hereinafter *The Helsinki Rules*].

<sup>31</sup> Int’l Law Comm’n, *Draft Articles on the Law of Transboundary Aquifers, with Commentaries*, art. 4, 60<sup>th</sup> Sess. (2008).

<sup>32</sup> Int’l Law Comm’n, *Protection of the Atmosphere: Texts and Titles of Draft Guidelines and Preamble Adopted by the Drafting Committee on First Reading*, U.N. Doc. A/73/10, at guideline 6, (2018).

<sup>33</sup> *International Watercourses*, *supra* note 29, at art. 5(1).

in consideration of each interested state's circumstances.<sup>34</sup> "Reasonable," in turn, requires taking measures to maximize the benefits accruing to all states.<sup>35</sup>

The UNWC and other sources set forth a non-exhaustive set of factors bearing on the equity and reasonableness of utilization, including a) geographic, climatic, and ecological considerations, b) social and economic needs, c) dependent populations, d) downstream effects, e) existing and potential uses, f) conservation and development, and g) alternative uses.<sup>36</sup> These factors are to be weighted according to their relative importance under the circumstances, allowing for flexibility in application.<sup>37</sup>

### C. Tensions and Ambiguities

Despite this evaluative guidance, the contours of the ERU principle remain contested and poorly defined in international law. Textual sources provide little instruction as to the application of the multi-factor test when a conflict of uses arises. Treaty and customary law dictate that the relative weights are to be assigned case by case, with special regard for "vital human needs."<sup>38</sup> But without clearer guidance as to their prioritization, these criteria have been described as of "limited utility" in practice.<sup>39</sup> Vagueness as to the substance of ERU has led to disagreements between resource-sharing states, "while not providing any tools for resolving [them]."<sup>40</sup>

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<sup>34</sup> Int'l Law Comm'n, *Draft Articles on the Law of the Non-Navigational Uses of International Watercourses and Commentaries Thereto and Resolution on Transboundary Confined Groundwater*, U.N. Doc. A/CN.4/L.492, Corr.1, Corr.2, Corr.3 and Add.1 at 98 (1994) [hereinafter *Draft Articles on the Law of Non-Navigational Uses*].

<sup>35</sup> *Id.* at 97.

<sup>36</sup> Convention on the Law of the Non-Navigational Uses of International Watercourses, art. 6 (May 21, 1997), U.N. Doc. A/RES/51/229. See also Int'l Law Comm'n, *Draft Articles on the Law of Transboundary Aquifers, with Commentaries*, art. 5, U.N. Doc. A/63/10 at 22, (2008); *The Helsinki Rules, supra* note 30, at art. 5.

<sup>37</sup> Convention on the Law of the Non-Navigational Uses of International Watercourses, art. 6 (May 21, 1997), U.N. Doc. A/RES/51/229.

<sup>38</sup> International Watercourses, art. 10, *supra* note 29.

<sup>39</sup> Bruce Lankford, *Does Article 6 (Factors Relevant to Equitable and Reasonable Utilization) in the UN Watercourses Convention Misdirect Riparian Countries?*, 38 WATER INT'L 130, 130 (2013).

<sup>40</sup> Itay Fischhendler, *Ambiguity in Transboundary Environmental Dispute Resolution: The Israel-Jordanian Water Agreement*, 45 J. PEACE RSCH. 80 (2008).

Further ambiguity clouds ERU's relational status in respect to NSH. The inherent tension between these principles figures prominently in resource disputes, with states undertaking development projects appealing to the ERU as a reasonableness standard while impacted neighboring states champion NSH as a rule of strict liability.<sup>41</sup> Historically, *sic utere* predominated, with the concept of ERU only developing in the mid-20<sup>th</sup> century.<sup>42</sup> Many treaties still give preference to existing uses, thereby acting to preserve the status quo.<sup>43</sup> More recently, however, ERU has overtaken NSH in precedence by most estimations, labeled as the "guiding criterion" by the drafters of the UNWC.<sup>44</sup> The UNWC consequently prescribes a balancing of interests in which the harm caused is one factor among many.<sup>45</sup> To accommodate this reordering, "harm" has been reinterpreted as "legal harm" rather than "factual harm."<sup>46</sup>

International courts and tribunals have also wrestled with the contradiction to little avail. In the International Court of Justice's ("ICJ") 1997 *Gabčíkovo-Nagymaros* case, it trumpeted ERU to the diminution of the no-harm principle.<sup>47</sup> However, in its 2010 *Pulp Mills* decision, the Court leaned heavily on *sic utere*.<sup>48</sup> With no judicial or scholarly consensus emerging, the interplay between the two principles remains "uncertain and confused" and "susceptible to contradictory interpretations."<sup>49</sup> As a result, lack of clarity as to how ERU and NSH assign property rights in natural resources has been at the heart of the legal dispute over the GERD.<sup>50</sup>

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<sup>41</sup> Sharmila L. Murthy and Fatima Mendikulova, *Water, Conflict, and Cooperation in Central Asia: The Role of International Law and Diplomacy*, 18 VT. J. ENVTL. L. 400, 411–12 (2017).

<sup>42</sup> Tamar Meshel, *Swimming Against the Current: Revisiting Principles of International Water Law in the Resolution of Fresh Water Disputes*, 61 HARV. INT'L L. REV. 135, 152–54 (2020).

<sup>43</sup> Murthy and Mendikulova, *supra* note 41, at 411.

<sup>44</sup> *Draft Articles on the Law of Non-Navigational Uses*, *supra* note 34, at 103.

<sup>45</sup> *Id.*

<sup>46</sup> Meshel, *supra* note 42, at 154–57.

<sup>47</sup> *Id.* at 157 (citing *Gabčíkovo-Nagymaros Project (Hungary/Slovakia)*, 1997 I.C.J. 7 (Sept. 25)).

<sup>48</sup> *Id.* at 157–58 (citing *Pulp Mills on River Uruguay (Argentina v. Uruguay)*, 2010 I.C.J. 14, paras. 175, 177 (Apr. 20)).

<sup>49</sup> *Id.* at 141.

<sup>50</sup> Rawia Tawfik & Ines Dombrowsky, *GERD and Hydropolitics in the Eastern Nile: From Water-Sharing to Benefit-Sharing?* in Ana Elisa Cascão,

## II. FURTHER SOURCES OF INTERNATIONAL OBLIGATIONS

ERU and NSH might be said together to comprise a *lex specialis* governing the usage of shared natural resources. But they are not the only relevant sources of public international law. International human rights commitments apply extraterritorially under circumstances that might be met by control over shared resources. Certain international crimes may be committed by depriving populations of vital resources. And action that results in an acute resource shortage might be considered a use of force or an armed attack for purposes of the UN Charter. This Part therefore considers whether the mismanagement of shared natural resources might constitute a breach of international obligations apart from ERU and NSH.

### A. *International Human Rights Law*

Human rights law typically protects individuals and communities from abuses committed by their own governments. Under certain circumstances, however, states may owe human rights obligations to populations outside of their territory. In fact, with the possible exception of the International Convention on Civil and Political Rights (“ICCPR”),<sup>51</sup> the texts of human rights treaties rarely explicitly confine themselves to the territorial boundaries of state parties, but instead apply throughout the state’s *jurisdiction*.<sup>52</sup> Jurisdiction may at times be extraterritorial, especially when a state exercises some form of control over persons or property abroad or is

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Alistair Rieu-Clarke, and Zeray Yihdego, eds., *THE GRAND ETHIOPIAN RENAISSANCE DAM AND THE NILE BASIN: IMPLICATIONS FOR TRANSBOUNDARY WATER COOPERATION* (Routledge ed., 2018).

<sup>51</sup> See Marko Milanovic, *Human Rights Treaties and Foreign Surveillance: Privacy in the Digital Age*, 56 *HARVARD INTL. L. J.* 81, 108–11 (2015) (The ICCPR obligates state parties “to respect and to ensure to all individuals within its territory and subject to its jurisdiction the rights recognized in the [ ] Convention.” International covenant on Civil and Political Rights, Dec. 16, 1966, 999 U.N.T.S. 171, art. 2(1). Notwithstanding the usage of the term “territory,” some scholars have suggested that this article yet admits of extraterritorial application.); see also THOMAS BUERGENTHAL, *TO RESPECT AND TO ENSURE: STATE OBLIGATIONS AND PERMISSIBLE DEROGATIONS*, *THE INTERNATIONAL BILL OF HUMAN RIGHTS: THE COVENANT ON CIVIL AND POLITICAL RIGHTS* (Louis Henkin, ed. 1981).

<sup>52</sup> MARKO MILANOVIC, *EXTRATERRITORIAL APPLICATION OF HUMAN RIGHTS TREATIES: LAW, PRINCIPLES, AND POLICY* 17–18 (Oxford 2011).

otherwise in a position to influence the rights of non-citizens. States sharing resources might attain to this level of control over the rights potentialities of their neighbors. Specifically, one state's utilization of a shared resource has the potential to profoundly impact the human rights to food, water, health, and life in other states reliant upon the same resource.

This section presents four models representing the judicial and scholarly treatment of the extraterritorial application of human rights obligations and assesses their consequences for states sharing natural resources. The first two models—effective control and personal jurisdiction—do not seem like they would impose additional human rights obligations upon states sharing natural resources, at least in their current forms. On the other hand, the latter two approaches—negative rights and functionalism—do lead to the application of extraterritorial human rights law to transboundary resources.

### 1. *Effective Control*

According to one strand of jurisprudence, espoused in the case law of the European Court of Human Rights (“ECtHR”) and the ICJ,<sup>53</sup> human rights treaties apply in areas where state parties exercise *effective control*, even if outside of national territory. The paradigmatic example is a military occupation, though the standard for effective control is not necessarily coterminous with the meaning of occupation as codified in international humanitarian law.<sup>54</sup> The threshold for effective control is set relatively high, though still lower than the level applicable within the state's own territory and not necessarily exclusive.<sup>55</sup> In several cases examining whether or not a foreign state had exerted effective control, the outcome has turned on whether it exercised “public powers normally . . . exercised by a sovereign government.”<sup>56</sup>

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<sup>53</sup> *Loizidou v. Turkey*, App. No. 15318/89, Judgment, para. 62 (Feb. 23, 1995); *Legal Consequences of the Construction of a Wall in the Occupied Palestinian Territory*, Advisory Opinion, paras. 109–13 (July 9, 2004); *Armed Activities on the Territory of the Congo (Congo v. Uganda)*, Judgment, paras. 179, 216–17 (Dec. 19, 2005).

<sup>54</sup> MILANOVIC, *supra* note 52, at 141–47.

<sup>55</sup> *Id.* at 140–41, 147–51.

<sup>56</sup> *Al-Skeini v. United Kingdom*, App. No. 55721/07, Judgment, para. 135, 149 (July 7, 2011); *Al-Saadoon v. Secretary of State for Defence*, England and Wales High Court 715, para. 74 (2015).

States sharing resources may command a considerable level of control over the destinies of their neighbors. The construction of the GERD, for example, may have catastrophic human rights consequences in other riparian states. Recognizing this interrelation, treaties governing the usage of transboundary resources often regulate activities within a state party's "jurisdiction or control" rather than activities within its territory alone.<sup>57</sup> In this context, "control" would seem to denote a capacity to effect change by engaging in or refraining from a certain activity with transboundary effects. This is not, however, the meaning assigned to "effective control" in the realm of human rights, where it is bound to a physical presence and the exercise of government functions. Based on this standard, it is unlikely that a state would be considered to have assumed effective control of foreign territory simply by virtue of its sharing resources with another.

## 2. *Personal Jurisdiction*

Another model for the extraterritorial application of human rights law, embraced by several UN treaty bodies,<sup>58</sup> the Inter-American Commission of Human Rights,<sup>59</sup> and the ECtHR,<sup>60</sup> is based on control over *persons* rather than territory. Under this interpretation, jurisdiction is founded upon "the relationship between the individual and the State," regardless of location.<sup>61</sup> Authority over the individual might derive from nationality, a custodial or some other special relation, or an exercise of a legal power, though none of these criteria sufficiently captures the full range of cases that would intuitively be

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<sup>57</sup> See, e.g. African Convention on the Conservation of Nature and Natural Resources, preamble (2003); General Assembly Resolution 3281 (XXIX), *Charter of Economic Rights and Duties of States*, art. 30 (Dec. 12, 1974), U.N. Doc. A/RES/3281(XXIX); UN Environment Programme, *Draft Principles in the Field of the Environment for the Guidance of States in the Conservation and Harmonious Utilization of Natural Resources Shared by Two or More States*, principle 3.1 (May 19, 1978), U.N. Doc. UNEP/GC.6/CRP.2; Rio Declaration on Environment and Development, principle 2 (Aug. 12, 1992), U.N. Doc. A/CONF.151/26.

<sup>58</sup> *Lopez Burgos v. Uruguay*, Comm. No. R.12/52, UN Doc. Supp. No. 40 (A/36/40), 176 (1981); Committee Against Torture, para. 16 (Jan. 24, 2008), General Comment No. 2, UN Doc. CAT/C/GC/2.

<sup>59</sup> *Coard v. United States*, Case No. 10.951, Report No. 109/99, para. 37; *Saldaño v. Argentina*, Report No. 38/99, paras. 15–20.

<sup>60</sup> *Al-Skeini*, *supra* note 56, at 137.

<sup>61</sup> *Celiberti de Casariego v. Uruguay*, Comm. No. 56/1979, UN Doc. CCPR/C/OP/1, 92 (1984).

included.<sup>62</sup> As Professor Marko Milanovic observes, personal jurisdiction tends to converge in practice with effective control as the physical unit of analysis contracts in size to, for instance, a single apartment building or detention facility.<sup>63</sup>

While it is true that in some sense resource-sharing states “exercise[ ] control or authority over [ ] individual[s]” beyond their borders,<sup>64</sup> it once again does not appear to be the type of control imagined in personal jurisdiction cases. In the jurisprudence of human rights tribunals adopting this reasoning as the basis for jurisdiction, there is always some form of direct and personalized contact between the foreign state and the victim, whether from the individual entering into state’s physical custody, becoming a target of a law enforcement action, serving as a member of its the armed forces, setting foot into embassy premises, or being subjected to a similar exercise of authority.<sup>65</sup> The case law does not support the extraterritorial application of human rights law on a personal jurisdiction theory based on a capacity to alter resource endowments.

### 3. *Positive and Negative Rights*

In human rights discourse, a distinction is commonly drawn between positive and negative rights. *Negative rights* may only be violated actively and are commonly associated with the ICCPR; *positive rights* may be violated passively and are primarily tabulated in the International Convention on Cultural, Economic, and Social Rights (“ICESCR”).<sup>66</sup> Critiquing the effective control and personal jurisdiction models as vague to the point of serving no practical use, Milanovic’s preferred formulation instead differentiates in treatment between positive and negative human rights obligations. He argues that, whereas the protection and fulfillment of positive human rights may only be possible within regions of effective control, negative human rights may be respected anywhere.<sup>67</sup> Milanovic defends this

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<sup>62</sup> MILANOVIC, *supra* note 52, at 207-8.

<sup>63</sup> *Id.* at 127-35.

<sup>64</sup> *Al-Skeini*, *supra* note 56, at 137.

<sup>65</sup> MILANOVIC, *supra* note 52, at 187-207.

<sup>66</sup> David Jason Karp, *What is the Responsibility to Respect Human Rights? Reconsidering the ‘Respect, Protect, and Fulfill Framework*, 12 INT’L THEORY 83, 88 (2020); Eric A. Posner, *Human Welfare, Not Human Rights*, 108 COLUM. L. REV. 1758, 1764 (2008).

<sup>67</sup> Milanovic, *Human Rights Treaties*, *supra* note 51, at 118-19.

system as predictable, rational, and in line with the human rights ideals of universality and effectiveness.<sup>68</sup>

Should Milanovic's theory be adopted by human rights courts, it would likely require imposing extraterritorial human rights obligations upon states sharing natural resources. The first step in the analysis would be to determine whether the right in question is positive or negative. As Milanovic admits, this sorting is not always straightforward, in part because some rights have both positive and negative aspects.<sup>69</sup> In Milanovic's terms, these rights would therefore bear both territorial and extraterritorial obligations. Take the right to water, which is inferred from the general ICESCR rights to an adequate standard of living and to the highest attainable standard of health.<sup>70</sup> According to the Committee on Economic, Social, and Cultural Rights ("CESCR"), the right contains both "freedoms," i.e. negative components, and "entitlements," i.e. positive components.<sup>71</sup> Positive elements of the right to water include state obligations to promote realization of and prevent outside interference with the right.<sup>72</sup> At the same time, states are themselves negatively bound by prohibitions against impairing the right to water, including in other states.<sup>73</sup> A violation of this obligation, per the CESCR, includes the "diminution of water resources affecting human health"<sup>74</sup>—possibly by overuse of a shared water supply.

By the same token, the rights to food, health, and life include an obligation that states refrain from conduct endangering their

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<sup>68</sup> *Id.* at 119.

<sup>69</sup> MILANOVIC, *supra* note 52, at 222.

<sup>70</sup> International Covenant on Economic, Social and Cultural Rights, art. 11–12, Dec. 16 1966, 993 U.N.T.S. 3 [hereinafter Covenant on Economic, Social and Cultural Rights]; Committee on Economic, Social, and Cultural Rights, arts. 11, 12, para. 3 (Jan. 20, 2003), General Comment No. 15: The Right to Water, UN Doc. E/C.12/2002/11.

<sup>71</sup> *Id.* para. 10.

<sup>72</sup> *See id.* paras. 23, 25–26; *see also* Rhett B. Larson, *The New Right in Water*, 70 WASH. & LEE L. REV. 2181, 2204–209 (2013) (describing the predominant approach to the right to water as a "provision right").

<sup>73</sup> *See* Covenant on Economic, Social and Cultural Rights, paras. 21, 31, *supra* note 70; *see also* *What Price for the Priceless?: Implementing the Justiciability of the Right to Water*, 120 HARV. L. REV. 1067, 1085–86 (2007) (describing India's negative rights approach).

<sup>74</sup> Covenant on Economic, Social and Cultural Rights, para. 44(a), *supra* note 70.



enjoyment domestically or abroad.<sup>75</sup> The CESCR's commentary on the right to adequate food explicitly notes the need to adopt rights-oriented environmental policies "at both the national and international levels."<sup>76</sup> Likewise, the Human Rights Committee ("HRC") takes note of the threats to the rights to life posed by "[e]nvironmental degradation, climate change, and unsustainable development."<sup>77</sup> Accordingly, it requires states to utilize natural resources sustainably and enter into consultations with other states over activities likely to significantly affect the environment.<sup>78</sup> Collectively, this evidence supports Milanovic's framework by requiring resource-sharing states to observe negative human rights transnationally.

#### 4. *Functionalism*

Finding Milanovic's negative-positive model at times arbitrary and incomplete, Professor Yuval Shany instead puts forward a functionalist approach: "states should protect human rights wherever in the world they may operate, whenever they may reasonably do so."<sup>79</sup> The limiting principle that Shany proposes for this context-informed understanding of jurisdiction is that "the potential impact of the act or omission in question [must be] direct, significant, and foreseeable."<sup>80</sup> Thus, the failure to ameliorate hunger in a foreign state would not ordinarily be a human rights violation, but directly contributing to or

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<sup>75</sup> Committee on Economic, Social, and Cultural Rights, art. 11, para. 15, 36 (May 12, 1999), General Comment No. 12: The Right to Adequate Food (Art. 11), UN Doc. E/C.12/1999/5; Committee on Economic, Social, and Cultural Rights, art. 12, para. 33, 39 (Aug. 11, 2000), General Comment No. 14: The Right to the Highest Attainable Standard of Health (Art. 12), UN Doc. E/C.12/2000/4; Human Rights Committee, art. 6, para. 7 (Sept. 3, 2019), General Comment No. 36: Article 6: Right to Life, U.N. Doc. CCPR/C/GC/36.

<sup>76</sup> Committee on Economic, Social, and Cultural Rights, art. 11, para. 4, *supra* note 75.

<sup>77</sup> Human Rights Committee, art. 6, para. 62, *supra* note 75.

<sup>78</sup> *Id.*

<sup>79</sup> See Yuval Shany, *Taking Universality Seriously: A Functional Approach to Extraterritoriality in International Human Rights*, 7 L. & ETHICS OF HUMAN RTS. 47, 67 (2013); see also Maria L. Banda, *Regime Congruence: Rethinking the Scope of State Responsibility for Transboundary Environmental Harm*, 103 MINN. L. REV. 1879, 1927–31 (2019) (positing a theory of extraterritorial application of human rights based on their "direct effects").

<sup>80</sup> *Id.* at 68–9. See also *Maastricht Principles on Extraterritorial Obligations of States in the Area of Economic, Social, and Cultural Rights* art. 9(b) (applying the scope of jurisdiction to "situations over which State acts or omissions bring about foreseeable effects on the enjoyment of economic, social, and cultural rights, whether within or outside its territory").

perhaps even tolerating the causes of global hunger might be.<sup>81</sup> Conveying a concern for extending state human rights obligations too far, Shany rejects the notion of imposing upon states overly onerous duties, such as requiring them to send aid to foreign peoples or to halt pollution altogether. The state acts and omissions in these examples, writes Shany, are too causally attenuated from the harms.<sup>82</sup>

A functionalist perspective presents the clearest path to imposing extraterritorial human rights duties upon states holding transboundary resources. In his own exposition, Shany concludes analogously that restricting the transnational supply of essential resources such as gas or electricity would constitute human rights violations.<sup>83</sup> By virtue of geography, resource-sharing states are in a position to reasonably affect the human rights climate in other states. This would not mean that they could not exploit these resources for themselves, but only that they must not dramatically alter the available supply.

### B. *International Criminal Law*

In addition to its human rights implications, the gross mismanagement of shared resources may raise the specter of international criminal liability. International law has for decades grappled with how to assign accountability for environmental harms. In preparing its Code of Crimes against the Peace and Security of Mankind, the ILC considered listing environmental damage as a crime against humanity.<sup>84</sup> Numerous commentators have argued in favor of such a move<sup>85</sup> and advocates have attempted unsuccessfully to prompt

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<sup>81</sup> Yuval Shany, *Taking Universality Seriously: A Functional Approach to Extraterritoriality in International Human Rights*, 7 L. & ETHICS OF HUMAN RTS. 47, 68–9 (2013).

<sup>82</sup> *Id.*; see also *Bankovic v. Belgium*, App. No. 52207/99, para. 75 (Dec. 12, 2001) (holding that liability based purely on causality is “tantamount to arguing that anyone adversely affected by any act imputable to a Contracting State, wherever in the world that act may have been committed or its consequences felt, is thereby brought within the jurisdiction of the State for the purpose of... [the European Convention on Human Rights]”).

<sup>83</sup> Shany, *supra* note 81, at 66–7.

<sup>84</sup> Christian Tomuschat, *Document on Crimes Against the Environment*, 2 Y.B. OF THE INT’L L. COMM. 16, 18 (1996).

<sup>85</sup> See generally, e.g. Anastacia Greene, *The Campaign to Make Ecocide an International Crime: Quixotic Quest or Moral Imperative*, 30 FORDHAM ENVTL. L. REV. 1 (2019); Caitlin Lambert, *Environmental Destruction in Ecuador: Crimes Against Humanity under the Rome Statute?*, 30 LEIDEN J. INT’L L. 707 (2017);

the International Criminal Court (“ICC”) to open investigations into instances of environmental degradation.<sup>86</sup> In a policy paper published in 2016, the ICC’s Office of the Prosecutor expressed interest in prosecuting crimes related to the exploitation of natural resources and the destruction of the environment.<sup>87</sup> In furtherance of that initiative, it is possible that egregious abuses of shared natural resources could be punished under the Rome Statute as crimes against humanity or, albeit less likely, as genocide.

### 1. *Crimes against Humanity*

The crimes against humanity of forcible transfer of population and other inhumane acts are the closest matches to the harms perpetrated by expropriation of natural resources. In extreme cases, arguments might also be made for extermination and persecution. But whether any state official will be held criminally liable for these acts would likely depend on the application of the *chapeau* criteria for crimes against humanity. Specifically, the inquiry hinges on whether resource depletion can properly be considered an “attack” under Article 7 of the Rome Statute.

#### i. Contextual Factors

As defined in Article 7, a crime against humanity consists of the commission of any of a set of specified acts “as part of a widespread or systematic attack directed against any civilian population, with knowledge of the attack.”<sup>88</sup> An “attack” in this context means “acts of violence,” though not necessarily via physical violence or armed force.<sup>89</sup> Indeed, several different classes of crimes against humanity do not necessarily entail physical violence, such as

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Audrey Crasson, *The Case of Chevron in Ecuador: The Need for an International Crime against the Environment?*, 9 AMSTERDAM L. FORUM 29 (2017).

<sup>86</sup> *Situation in Ecuador*, Comm. (Oct. 2014).

<sup>87</sup> Office of the Prosecutor, *Policy Paper on Case Selection and Prioritisation*, INT’L CRIM. CT. 3, 4 (Sept. 15, 2016), [https://www.icc-cpi.int/itemsdocuments/20160915\\_otp-policy\\_case-selection\\_eng.pdf](https://www.icc-cpi.int/itemsdocuments/20160915_otp-policy_case-selection_eng.pdf) (para. 7).

<sup>88</sup> Rome Statute of the International Criminal Court, art. 7(1), July 17, 1998, 2187 U.N.T.S. 90 [hereinafter Rome Statute 1998].

<sup>89</sup> *Prosecutor v. Kunarac*, Case No. IT-96-23 & 23/1, Trial Judgement, para. 415 (Nov. 8, 1999); *Elements of Crimes*, INT’L CRIM. CT. 1, 5 (2011), <https://www.icc-cpi.int/nr/rdonlyres/336923d8-a6ad-40ec-ad7b-45bf9de73d56/0/elementsofcrimeseng.pdf>; *Prosecutor v. Akayesu*, Case No. ICTR-96-4-T, Trial Judgement, para. 581 (Sept. 2, 1998).

deportation, persecution, and apartheid. Courts have therefore broadly construed “attack” as meaning “any mistreatment of the civilian population”<sup>90</sup> that “caus[es] physical or mental injury.”<sup>91</sup> This may include “exerting pressure on the population to act in a particular manner.”<sup>92</sup>

Action that drastically alters resource allocations might resemble other acts of deprivation that have been adjudged “attacks.” Charges of crimes against humanity have been brought before the International Criminal Tribunal for Yugoslavia (“ICTY”) for the denial of access to food, water, medical care, shelter, and sanitation facilities to prisoners.<sup>93</sup> Transboundary harms accomplished through a reduction in natural resources appear somewhat different from these cases because the affected population is not within the physical control or custody of the aggressor *per se*. But the statutory language and case law give little indication that such a distinction is necessarily relevant. Moreover, the crime against humanity of extermination is explicitly defined in the Rome Statute to include “the deprivation of access to food and medicine” under prescribed conditions.<sup>94</sup>

To qualify as a crime against humanity, the “attack” must also be committed “pursuant to or in furtherance of a State or organizational policy.” The ICC has held that such a policy may be deduced from “repeated actions occurring according to the same sequence, or the existence of preparations or collective mobilization orchestrated and coordinated by the State or organization.”<sup>95</sup> State decisions related to natural resource utilization would almost inevitably be formed on the basis of policy. However, the Rome Statute describes an attack not as a singular event, but as a “course of conduct” comprised of multiple

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<sup>90</sup> *Nahimana*, Appeal Judgement, para. 916 (Nov. 28, 2007) (citing *Prosecutor v. Kunarac*, Case No. IT-96-23-T, Appeal Judgement, para. 86 (June 12, 2002)).

<sup>91</sup> *Prosecutor v. Krajisnik*, Case No. IT-00-39, Trial Judgement, para. 706 (Mar. 1, 2002).

<sup>92</sup> *Prosecutor v. Akayesu*, Case No. ICTR-96-4-T, Trial Judgement, para. 581 (Sept. 2, 1998).

<sup>93</sup> *Prosecutor v. Vasiljevic*, Case No. IT-98-32-T, Trial Judgement, para. 54 (Nov. 29, 2002); *Prosecutor v. Tadic*, Case No. IT-94-1-T, Opinion and Judgment, para. 707 (May 7, 1997); *Prosecutor v. Nikolic*, Case No. IT-94-2-S, Sentencing Judgement, para. 69 (Dec. 18, 2003).

<sup>94</sup> Rome Statute 1998, art. 7(2)(b), *supra* note 88.

<sup>95</sup> *Prosecutor v. Katanga*, Case No. ICC-01/04-01/07, para. 1109 (Mar. 7, 2014) (Judgement pursuant to article 74 of the Statute.).

distinct acts.<sup>96</sup> Courts have likewise generally understood crimes against humanity to refer to patterns of repeated violence, as opposed to isolated incidents,<sup>97</sup> and have consequently required a nexus between each individual act and the broader attack.<sup>98</sup> This approach has received no shortage of criticism, with many commentators preferring to focus on the magnitude of the harm caused rather than the quantity of discrete acts involved.<sup>99</sup> Nonetheless, under the prevailing interpretation, the construction and filling of a dam like the GERD would not amount to an “attack” were it to be considered one continuous act. On the other hand, this “act” is unlike many others because it would take place over the course of years and conceptually could be subdivided into smaller acts corresponding to the various stages of construction and filling.

If transboundary resource harms can be recognized as an “attack” at all, there is a good chance that they will satisfy the other contextual elements for crimes against humanity. The term “widespread” “connotes the large-scale nature of the attack and the number of targeted persons.”<sup>100</sup> “Systematic” refers to planning and direction, and may be inferred when the attack is pursuant to a state policy.<sup>101</sup> An attack is “directed against [the] civilian population” if noncombatants are the “primary object,” considering a number of

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<sup>96</sup> Rome Statute 1998, art. 7(2)(a), *supra* note 98 (defining “attack directed against any civilian population” as “a course of conduct involving the multiple commission of [qualifying] acts...”).

<sup>97</sup> *Prosecutor v. Tadic*, Case No. IT-94-1-A, para. 11 (Nov. 14, 1995) (Decision on the Form of the Indictment); *Prosecutor v. Muvunyi*, Case No. ICTR-2000-55A-T, Trial Judgement, para. 512 (Sept. 12, 2006); *Prosecutor v. Gbagbo*, Case No. ICC-02/11-01/11, para. 215 (June 12, 2014) (Decision on the confirmation of charges.).

<sup>98</sup> *Situation in the Republic of Kenya*, Case No. ICC-01/09, para. 97–8 (Mar. 31, 2010) (Decision Pursuant to Article 15 of the Rome Statute on the Authorization of an Investigation into the Situation in the Republic of Kenya.).

<sup>99</sup> Chile Eboe-Osuji, *Crimes Against Humanity: Directing Attacks Against a Civilian Population*, 2 AFR. J. L. STUD. 118, 120 (2008); Mohamed Elewa Badar, *From the Nuremberg Charter to the Rome Statute: Defining the Elements of Crimes against Humanity*, 5 SAN DIEGO INT’L L. J. 73, 106–07 (2004).

<sup>100</sup> *Prosecutor v. Harun and Kushayb*, Case No. ICC-02/05-01/07, para. 62 (Apr. 27, 2007) (Decision on the Prosecution Application under Art. 58(7) of the Statute) (citing *Prosecutor v. Kordic and Cerkez*, Case No. IT-95-14/2-A, Appeals Judgement, para. 94 (Dec. 17, 2004)).

<sup>101</sup> *Prosecutor v. Kunarac*, Case No. IT-96-23/1-A, Appeals Judgement, para. 98 (June 12, 2002); *Prosecutor v. Katanga*, Case No. ICC-01/04-01/07, para. 396 (Sept. 30, 2008) (Decision on the Confirmation of Charges.); *Prosecutor v. Akayesu*, Case No. ICTR-96-4-T, Judgement, para. 580 (Sept. 2, 1998).

different factors.<sup>102</sup> Essentially, civilians are the primary object of an attack when the population at large is intentionally targeted.<sup>103</sup> As for the *mens rea*, the perpetrator must have knowledge of the attack and that his or her acts are a part of it.<sup>104</sup> Anyone involved in something like a dam project would automatically have knowledge of the attack when the attack is the dam itself.

## ii. Substantive Offenses

If able to clear the preliminary hurdles outlined above, an extreme appropriation of shared natural resources may amount to the crimes against humanity of forcible transfer of population, other inhumane acts, extermination, or persecution. Depending on the facts, the first three might reasonably be charged provided that the perpetrator acted with knowledge or intent, which may be inferred if the consequences were foreseeable.<sup>105</sup> Because the environmental impacts of development projects are often disputed, however, it may be difficult to conclusively show that a responsible official was fully aware that it would result in death, displacement, or other severe harm. Attribution of *mens rea* might be made simpler when harms take more immediate effect, such as flooding occasioned by the filling of a dam, rather than those that are more gradual, such as environmental degradation or long-term over-utilization.

As discussed in more detail below, the crime against humanity of persecution has a unique *mens rea* element that makes it unlikely to apply to the mismanagement of shared resources. With this exception, the remainder of this section will consider only the respective elements of *actus reus*.

### a. Forcible Transfer

The loss of access to vital resources can force mass migration; some estimates suggest that as much as one-third of Egypt's

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<sup>102</sup> *Prosecutor v. Kunarac*, *supra* note 101, para. 91.

<sup>103</sup> *Situation in the Republic of Kenya*, Case No. ICC-01/09, para. 81 (Mar. 31, 2010) (Decision Pursuant to Article 15 of the Rome Statute on the Authorization of an Investigation into the Situation in the Republic of Kenya.); Chile Eboe-Osuji, *supra* note 99, at 122–24.

<sup>104</sup> See *Prosecutor v. Blakic*, Case No. IT-95-14-T, Trial Judgement, para. 247 (Mar. 3, 2000); *Prosecutor v. Kayishema and Ruzindana*, Case No. ICTR095-1-T, Trial Judgement, para. 133 (May 21, 1999).

<sup>105</sup> Rome Statute 1998, art. 30, *supra* note 88.

population could be displaced by the GERD.<sup>106</sup> In the aftermath of such an occurrence, a strong case could be made out for a charge of forcible transfer of population based on the jurisprudence of international tribunals.

Importantly for this analysis, physical force is not required to commit the crime of forcible transfer. Instead, the impetus for displacement “may include threat of force or coercion, such as that caused by... duress... or by taking advantage of a coercive environment.”<sup>107</sup> The ICTY has interpreted the crime to mean creating conditions such that flight becomes necessary for survival, leaving victims without a “genuine choice.”<sup>108</sup> This may be accomplished by the imposition of “severe living conditions” that disturb the victims’ right to be able to remain in their homes and communities, including the deprivation of food and water.<sup>109</sup> Removal of a civilian population through these or any other means is only permitted under international law for the protection of the population or when mandated by military necessity,<sup>110</sup> neither of which would excuse the misuse of shared resources in ordinary circumstances.

#### b. Other Inhumane Acts

Disrupting the supply of natural resources could also be prosecuted as the catchall crime against humanity for “other inhumane acts of a similar character” to those explicitly enumerated in the Rome Statute.<sup>111</sup> The ICTY has indicated that the deprivation of sustenance would meet this standard by regarding it as functionally commensurate with other crimes against humanity.<sup>112</sup> Several different international

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<sup>106</sup> David Hearst, *How Ethiopia’s Renaissance Dam Became Egypt’s Nakba*, MIDDLE EAST EYE (Aug. 4, 2020), <https://www.middleeasteye.net/opinion/egypts-nakba-ethiopia-dam-nile-sisi>.

<sup>107</sup> *Elements of Crimes*, *supra* note 89, at 6 (Fn. 12).

<sup>108</sup> *Prosecutor v. Krstic*, Case No. IT-98-33-T, Trial Judgement, para. 530 (Aug. 2, 2001).

<sup>109</sup> *Prosecutor v. Krajisnik*, Case No. IT-00-39-A, Appeals Judgement, para. 319 (Mar. 17, 2009) (citing *Prosecutor v. Krajisnik*, Case No. IT-00-39-T, Trial Judgement, para. 729 (Sept. 27, 2006)).

<sup>110</sup> *Prosecutor v. Nuon and Khieu*, Case No. 002/19-09-2007/ECCC/TC, Trial Judgement, para. 155 (Aug. 7, 2014).

<sup>111</sup> Rome Statute 1998, art. 7(1)(k), *supra* note 88.

<sup>112</sup> *Prosecutor v. Kupreskic*, Case No. IT-95-16, Trial Judgement, para. 631 (Jan. 14, 2000) (“Such an attack on property in fact constitutes a destruction of the livelihood of a certain population. This may have the same inhumane consequences as a forcible transfer or deportation.”). *See also Prosecutor v.*

tribunals have likewise construed the failure to provide for adequate living conditions to detainees, including sufficient food and water, as an inhumane act.<sup>113</sup> Again, these cases differ from transboundary harm to resources because of the custodial relationship, but there is no jurisprudential cause to believe that difference is legally salient. Moreover, the Rome Statute names “starvation of civilians as a method of warfare by depriving them of objects indispensable to their survival” as a war crime in international armed conflicts,<sup>114</sup> suggesting that a loss of essential resources is considered a very grave harm.

### c. Extermination

A perpetrator may be guilty of the crime against humanity of extermination if he or she kills one or more persons as part of a mass killing.<sup>115</sup> To apply to natural resource depletion, this would require a factual showing that the allegedly criminal utilization caused the death of “a numerically significant part of the population concerned.”<sup>116</sup> If this result does occur, extermination would be an appropriate charge in recognition of the colossal scale of the crime.<sup>117</sup> Moreover, as noted above, the Rome Statute definition expressly lists “deprivation of access to food and medicine, calculated to bring about the destruction of part of a population” as one method of extermination.<sup>118</sup> While the word “calculated” would seem to require some additional showing of scienter, under the Rome Statute intent may be imputed constructively when the resulting consequence was foreseeable to the actor.<sup>119</sup>

### d. Persecution

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*Nikolic*, Case No. IT-94-2-I, Indictment, para. 24.1 (Nov. 4, 1994) (charging the defendant with a crime against humanity for “participating in humane acts” including “providing inadequate food” and “providing living conditions failing to meet minimal basic standards”).

<sup>113</sup> *Prosecutor v. Leite*, Case No. 04a/2001, Judgement, para. 156–62 (Dec. 7, 2002); *Prosecutor v. Prlić*, Case No. IT-04-74-T, Trial Judgement, vol. 3, para. 1059–67 (May 29, 2013); *Prosecutor v. Nuon and Khieu*, Case No. 002/19-09-2007/ECCC/TC, Trial Judgement, para. 456–58 (Aug. 7, 2014).

<sup>114</sup> Rome Statute 1998, art. 8(2)(b)(xxv), *supra* note 88.

<sup>115</sup> *Elements of Crimes*, *supra* note 89, at 6.

<sup>116</sup> *Prosecutor v. Krstić*, Case No. IT-98-33-T, Trial Judgement, para. 502 (Aug. 2, 2001); *see also Elements of Crimes*, *supra* note 89, at 5 (Fn. 7, 6).

<sup>117</sup> David Marcus, *Famine Crimes in International Law*, 97 AM. J. INT’L L. 245, 273 (2003).

<sup>118</sup> Rome Statute 1998, art. 7(2)(b), *supra* note 88.

<sup>119</sup> *Id.* art. 30(2)(b).



Unlike other crimes against humanity, persecution is a crime of specific intent, involving the illegal deprivation of one or more fundamental rights on the basis of group identity.<sup>120</sup> One of these protected identities is nationality, allowing for the possibility of charging state actors with persecution for acts that disproportionately harm citizens of another state. Not only must the perpetrator be aware of the discriminatory effects of his or her action, he or she “must consciously intend to discriminate,” with discriminatory intent serving as a significant, if not primary, motive.<sup>121</sup> In the related context of genocide, specific intent may be discerned from “the general political doctrine which gave rise to the acts... or the repetition of destructive and discriminatory acts.”<sup>122</sup> The element of intent probably makes persecution an inapt fit for resource malfeasance. Given the benefits of resource exploitation to the acting state’s own population, it seems unlikely that discrimination against other dependent populations would be counted among the driving motives for it.

## 2. *Genocide*

The crime of genocide differs from crimes against humanity in several respects. First, it does not require that the subject acts be committed as part of an “attack,”<sup>123</sup> eliminating the difficulties with defining abuses of shared resources as such. Like the crime against humanity of persecution, genocide is also a crime of specific intent, concerning only those acts which are “committed with intent to destroy, in whole or in part, a national, ethnical, racial, or religious group.”<sup>124</sup> While the inclusion of nationality makes it possible that genocide would apply to resource utilizations that harm only foreign populations, it again seems unlikely that the primary motives for such policies would be genocidal rather than economical, especially in light of general recognition for the right to development.<sup>125</sup> If they were, however, then state actors responsible for reducing the availability of

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<sup>120</sup> *Id.* art. 7(2)(g); *Elements of Crimes*, *supra* note 89, at 10.

<sup>121</sup> *Prosecutor v. Krnojelac*, Case No. IT-07-25-T, Trial Judgement, para. 435 (Mar. 15, 2002).

<sup>122</sup> *Prosecutor v. Karadžić & Mladić*, Case Nos. IT-95-5-R61, IT-95-18-R61, Review of the Indictments Pursuant to Rule 61 of the Rules of Procedure and Evidence, para. 94 (July 11, 1996).

<sup>123</sup> Rome Statute 1998, art. 6, *supra* note 88.

<sup>124</sup> *Id.*

<sup>125</sup> Peter Sharp, *Prospects for Environmental Liability in the International Criminal Court*, 18 VA. ENV'T L. J. 217, 234 (1999); Rome Statute 1998, art. 6, *supra* note 88.

resources in other states might be charged with genocide if it resulted in injuries including death or serious bodily or mental harm.

*C. The UN Charter and General Principles of International Law*

As the GERD has neared completion, sabers have been rattling in Egypt with increasing intensity,<sup>126</sup> illustrating the risk of resource disputes escalating into armed conflict. In 2013, top Egyptian politicians were caught on tape discussing the possibilities of an airstrike on the dam or of arming Ethiopian rebel groups.<sup>127</sup> In 2020, Egypt-based hackers launched a cyberattack on Ethiopian government websites.<sup>128</sup> Not long after, Ethiopia banned flights over the GERD as a defensive precaution,<sup>129</sup> with Donald Trump further stoking fears by suggesting that Egypt might “blow up” the dam.<sup>130</sup>

While the UN Charter broadly forbids member states from threatening or actually using force against other states,<sup>131</sup> it allows for a few exceptions. One is for action authorized by the Security Council,<sup>132</sup> which has in fact issued numerous resolutions concerning access to resources during or following armed conflict.<sup>133</sup> Another is Article 51 of the Charter, which grants states “the inherent right of individual or collective self-defence” against an “armed attack”

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<sup>126</sup> Samy Magdy, *Egyptian Media Urges Military Action against Ethiopia as Nile Talks Break Down*, THE TIMES OF ISR. (Oct. 22, 2019, 2:13 PM), <https://www.timesofisrael.com/egyptian-media-urges-military-action-against-ethiopia-as-nile-talks-break-down/>.

<sup>127</sup> Griff Witte, *Egypt Sees Ethiopian Dam as Risk to Water Supply*, THE GUARDIAN (June 18, 2013, 8:59 AM), <https://www.theguardian.com/world/2013/jun/18/egypt-ethiopia-dam-blue-nile>.

<sup>128</sup> Zecharias Zelalem, *An Egyptian Cyber Attack on Ethiopia by Hackers Is the Latest Strike over the Grand Dam*, QUARTZ (June 27, 2020), <https://qz.com/africa/1874343/egypt-cyber-attack-on-ethiopia-is-strike-over-the-grand-dam/>.

<sup>129</sup> *River Nile Row: Ethiopia Bans Flights above Grand Renaissance Dam*, BBC (Oct. 5, 2020), <https://www.bbc.com/news/world-africa-54416424#:~:text=Ethiopia's%20civil%20aviation%20authority%20has,crucial%20for%20its%20economic%20growth/>.

<sup>130</sup> Farouk Chothia, *Trump and Africa: How Ethiopia was ‘Betrayed’ over Nile Dam*, BBC (Oct. 27, 2020), <https://www.bbc.com/news/world-africa-54531747>.

<sup>131</sup> Charter of the U. N., art. 2(4), June 26, 1945, 1 U.N.T.S. XVI.

<sup>132</sup> *Id.* art. 42.

<sup>133</sup> James D. Fry & Agnes Chong, *UN Security Council Resolution of International Water Disputes*, 50 GEO. J. INT’L L. 363, 404–20 (2019).

launched by another state.<sup>134</sup> If not rising to the level of an “armed attack,” aggrieved states might nonetheless respond to an unlawful use of force by appealing to the principle of necessity or by imposing countermeasures.

### 1. *Uses of Force*

The UN Charter obliges member states to refrain from “the threat or use of force against the territorial integrity or political independence of any state.”<sup>135</sup> While there is no authoritative definition for the “use of force,” purely political or economic coercion would not necessarily suffice.<sup>136</sup> On the other hand, the force need not be physical or military in nature. Uses of force are instead distinguished from other hostile acts by their “scale and effects.”<sup>137</sup> The quantitative dimension of the force is thus weighted more strongly than its qualitative character.

The advent of cybercrime has prompted a rethinking of “uses of force,” particularly those which do not take kinetic form. The Tallinn Manual, the leading treatise on the application of international law in cyberspace, promulgates a non-exhaustive set of criteria to determine when a cyber operation amounts to a use of force. Most important among them is the severity of the impact registered.<sup>138</sup> Other factors include a) immediacy, b) causal directness, c) invasiveness, d) measurability of effects, e) military character, f) state involvement, and g) presumptive legality.<sup>139</sup> According to the Tallinn Manual, any action that causes death, injury, or property damage automatically meets this test.<sup>140</sup>

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<sup>134</sup> Charter of the U.N., art. 51, *supra* note 131.

<sup>135</sup> *See id.*; *see also* G. A., Declaration on Principles of International Law Concerning Friendly Relations and Co-operation among States in accordance with the Charter of the United Nations (Oct. 24, 1970).

<sup>136</sup> *See* INTERNATIONAL GROUP OF EXPERTS, TALLINN MANUAL ON THE INTERNATIONAL LAW APPLICABLE TO CYBER WARFARE Rule 10 para. 10 (Michael N. Schmitt, ed. 2013) [hereinafter TALLINN MANUAL] (observing that proposals to incorporate political and economic pressures into the definition of “force” have been considered and rejected).

<sup>137</sup> *Military and Paramilitary Activities in and against Nicaragua* (*Nicaragua v. U.S.*), Judgment, 1986 I.C.J. 14, para. 195 (June 27, 1986) [hereinafter *Nicaragua*]; TALLINN MANUAL, *supra* note 136, at Rule 11 para. 1.

<sup>138</sup> TALLINN MANUAL, *supra* note 136, at Rule 11 para. 9.

<sup>139</sup> *Id.*

<sup>140</sup> *Id.* at Rule 13 para. 6.

The application of the Tallinn factors to misappropriations of transboundary resources depends upon the type of resource and the type of utilization, particularly with respect to the severity, immediacy, causation, and measurability. Downstream harms caused by the GERD, for instance, would seem to score highly on these metrics, whereas minor disturbances in the balance may not. In some sense, property damage is inflicted by the very fact of one state's overconsumption of a common resource. Certainly, human harms may be inflicted as well, though it may be difficult to demonstrate causality.

i. Self-Defense

Some states, including the United States, maintain that there is no difference between an Article 2(4) "use of force" and an Article 51 "armed attack."<sup>141</sup> The majority view, however, is that these terms differ in degree. The most authoritative judicial guidance remains the ICJ's 1986 judgement in *Nicaragua v. US*, where it construed "armed attack" as meant to signify "the most grave forms of the use of force."<sup>142</sup>

Notwithstanding the canon of construction that a treaty term is to be interpreted "in accordance with [its] ordinary meaning,"<sup>143</sup> an "armed attack," like a "use of force," is generally treated as a gravity threshold rather than as literally requiring the use of military means and methods.<sup>144</sup> In its advisory opinion on the use of nuclear weapons, the ICJ pronounced that Article 51 applies to "any use of force,

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<sup>141</sup> Michael Schmitt, *Top Expert Backgrounder: Aborted U.S. Strike, Cyber Operation against Iran, and International Law*, JUST SECURITY (June 24, 2019), <https://www.justsecurity.org/64669/top-expert-backgrounder-on-aborted-u-s-strike-and-cyber-operation-against-iran-and-international-law/>.

<sup>142</sup> *Nicaragua*, *supra* note 137; *see also Case Concerning Oil Platforms (Islamic Republic of Iran v. United States of America)*, Judgement, 2003 I.C.J. 161, para. 51 (Nov. 6).

<sup>143</sup> Vienna Convention on the Law of Treaties, art. 31(1), May 23, 1969, 1155 U.N.T.S. 331.

<sup>144</sup> José Luis Aragón Cardiel, Amanda Davis, & Lauranne Macherel, *Modern Self-Defense: The Use of Force Against Non-Military Threats*, 49 COLUM. HUM. RTS. L. REV. 99, 114 (2018); Claire Wright, *Blueprint for Survival: A New Paradigm for International Environmental Emergences*, 29 FORDHAM ENV'T L. REV. 221, 296–97 (2017); Scott J. Shackelford and Richard B. Andres, *State Responsibility for Cyber Attacks: Competing Standards for a Growing Problem*, 42 GEO. J. INT'L L. 971, 996–98 (2011); Office of General Counsel, *An Assessment of International Legal Issues in Information Operations*, U.S. Dept. of Def. 18–19 (May 1999).

regardless of the weapons employed.”<sup>145</sup> By this view, any act causing significant loss of life or property damage may constitute an “armed attack.”<sup>146</sup> The expert drafters of the Tallinn Manual also considered severe damage to critical infrastructure to qualify.<sup>147</sup> In addition to its human costs, severe depletion of a vital resource might be akin to disabling critical infrastructure.

Textual strictures once again notwithstanding,<sup>148</sup> the notion of anticipatory self-defense is widely accepted today, even though Article 51 seemingly applies only to armed attacks which have already occurred. According to the approach favored by the Tallinn Manual, this doctrine permits states to respond in self-defense to an imminent armed attack at the “last feasible window of opportunity.”<sup>149</sup> This standard is not strictly temporal, but rather a contextual evaluation of the state’s ability to effectively defend itself. In the case of the GERD, Egypt’s right to anticipatory self-defense might begin at a moment when negotiations had failed and Ethiopia was preparing to fill the dam in a manner that would undeniably and irreversibly cause severe future harm.

## ii. Necessity

Even if it is not registered as an “armed attack,” a state enduring a loss of natural resources owing to a neighbor’s wrongdoing would not be without options. It might invoke the principle of necessity, which entitles aggrieved states to commit otherwise wrongful acts as a last resort in order to “safeguard an essential interest against a grave and imminent peril,” provided that in doing so they do not impair the essential interests of other states.<sup>150</sup> While the term is intended to apply only to “exceptional cases,”<sup>151</sup> presumably

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<sup>145</sup> *Legality of the Threat or Use of Nuclear Weapons*, Advisory Opinion, 1996 I.C.J. 226, para. 39 (July 8).

<sup>146</sup> Karl Zemanek, *Armed Attack*, Max Planck Encyclopedia of Pub. Int’l L., para. 21 (Oct. 2013).

<sup>147</sup> TALLINN MANUAL, *supra* note 136, at Rule 13 para. 16.

<sup>148</sup> Charter of the U.N., art. 2(4), *supra* note 131 (in which the right to self-defense is triggered only “if an armed attack occurs”).

<sup>149</sup> TALLINN MANUAL, *supra* note 136, at Rule 15 para. 4.

<sup>150</sup> Responsibility of States for Internationally Wrongful Acts, art. 25, G.A. Res. 56/83, Annex, U.N. Doc. A/RES/56/83 (Jan. 28, 2002).

<sup>151</sup> INTERNATIONAL LAW COMMISSION [ILC], DRAFT ARTICLES ON RESPONSIBILITY OF STATES FOR INTERNATIONALLY WRONGFUL ACTS, WITH COMMENTARIES 80 (2001) [hereinafter RESPONSIBILITY OF STATES].

impending environmental harms would meet that high threshold. Moreover, the ICJ has held that the perilous effects are considered imminent once the causes are in motion, even if there is a gap in time or if the extent of the coming harm has not been clearly established.<sup>152</sup>

A plea of necessity thus bears some resemblance to the meaning of self-defense under customary international law, in which it is treated as an inherent right even in the absence of an armed attack.<sup>153</sup> The *Caroline* incident, which is frequently referred to as the foundation for this view, was in fact treated at the time as a case of necessity rather than self-defense.<sup>154</sup> However, it is not clear that the modern understanding of necessity would abide a use of force;<sup>155</sup> indeed, the customary interpretation of self-defense is today the minority position.<sup>156</sup> Furthermore, necessity may only excuse action that does not impair the essential interest of another state. Even if abused, the sovereign rights to development and to the utilization of natural resources are likely essential interests that might be harmed by the counteraction of injured states.

## 2. Countermeasures

Countermeasures present another potential response to the misuse of shared natural resources. They allow an injured state to breach its international obligations respecting a state which has committed an internationally wrongful act in order to induce a return to compliance.<sup>157</sup> But a number of restrictions on the usage of countermeasures diminish their practicality in the context of resource disputes. For one, countermeasures, unlike self-defense, may not be invoked prospectively; they may only be implemented in response to

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<sup>152</sup> *Gabčíkovo-Nagymaros Project (Hungary/Slovakia)*, 1997 I.C.J. 7, paras. 51, 54 (Sept. 25, 1997).

<sup>153</sup> Charles Pierson, *Preemptive Self-Defense in an Age of Weapons of Mass Destruction: Operation Iraqi Freedom*, 33 DENV. J. INT'L L. & POL'Y 150, 156–59 (2020).

<sup>154</sup> RESPONSIBILITY OF STATES, *supra* note 151, at 81.

<sup>155</sup> *Id.* at 84; TALLINN MANUAL, *supra* note 136, at Rule 9 para. 10.

<sup>156</sup> Charles Pierson, *Preemptive Self-Defense in an Age of Weapons of Mass Destruction: Operation Iraqi Freedom*, 33 DENV. J. INT'L L. & POL'Y 150, 156–59 (2020).

<sup>157</sup> Responsibility of States for Internationally Wrongful Acts, art. 49, *supra* note 150.

an ongoing violation.<sup>158</sup> They also must be proportional, non-escalatory, and generally reversible.<sup>159</sup> Countermeasures may not include the threat or actual use of force and they must cease when the responsible state restores compliance.<sup>160</sup> Countermeasures may be a particularly ineffectual option for smaller states with limited means to apply political or economic pressure against wrongdoers even if restrictively licensed to flout international obligations.<sup>161</sup>

### III. SHARED RESOURCES AND THE DEVELOPMENT OF THE LAW

Examining shared natural resources through the lenses of international human rights law, international criminal law, and the UN Charter promotes the development of the law in two distinct ways. First, it can provide guidance to the adjudication of natural resource disputes by adding content to the blurry ERU and NSH concepts. At the least, it would seem that a utilization could hardly be considered “equitable and reasonable” if it violated an international duty. The fact of such a violation might also bear on the “significance” of the harm inflicted.

Second, the application of international human rights law, international criminal law, and the law of use of force to cases of competition over shared resources should prompt further reconsideration of the limitations of the classical forms of each of these bodies of law and their capacity to accommodate nontraditional threat vectors. To a certain extent, all have already begun to adapt to an era in which states face dangers that materialize outside of their jurisdictions. With global warming likely to intensify competition over resources, the urgency of this evolution is continually ascending.

#### A. *Development of the Law Concerning Shared Natural Resources*

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<sup>158</sup> Michael N. Schmitt, *Below the Threshold Cyber Operations: The Countermeasures Response Option and International Law*, 54 VA. J. INT'L L. 697, 715 (2014).

<sup>159</sup> Responsibility of States for Internationally Wrongful Acts, art. 49, *supra* note 150; Michael N. Schmitt, *supra* note 157, at 715; *Gabčíkovo-Nagymaros Project (Hungary/Slovakia)*, 1997 I.C.J. 7, para. 87 (Sept. 25).

<sup>160</sup> Responsibility of States for Internationally Wrongful Acts, arts. 50, 53, *supra* note 150.

<sup>161</sup> Sheng Li, *When Does Internet Denial Trigger the Right of Armed Self-Defense?* 38 YALE J. INT'L L. 179, 212 (2013).

A recognition of the consequences of competition over transboundary resources for international human rights law, international criminal law, and the UN Charter can lead to a fuller apprehension of the “equitable and reasonable” standard. While reasonableness is not synonymous with legality, unlawful conduct is unquestionably unreasonable.<sup>162</sup> Thus, resource utilizations that violate other international obligations would presumptively not be found “equitable and reasonable” and may cause “significant harm.”

A multidisciplinary legal analysis that places the ERU and NSH principles in the context of broader international law can therefore assist in the evaluation of a given utilization of a shared resource. The violation of a human rights norm or a criminal statute should be accounted for in any assessment grounded in international environmental law. In particular, shared resource utilization policies should be appraised based on their impacts on the rights to food, water, health, and life and the international criminal exposure of acting officials. Similarly, the Tallinn factors can provide guidance as to when a certain resource utilization amounts to an unlawful use of force, supplying further evidence as to its reasonableness. When a resource-sharing state does breach an international norm, affected states may consider the proportional responses available to them through self-defense, necessity, or countermeasures.

Reading the ERU and NSH principles alongside other bodies of international law is also justified as a juridical matter. The Vienna Convention on the Law of Treaties instructs that international agreements are to be interpreted in light of “any relevant rules of international law applicable in the relations between the parties.”<sup>163</sup> For shared natural resources, this exercise is facilitated by the mutual compatibility of the relevant legal regimes.<sup>164</sup> Consideration of rules protecting civilian populations is also in keeping with the purpose of treaties governing shared natural resources, which commonly place human needs at their center.<sup>165</sup>

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<sup>162</sup> OLIVER CORTEN, REASONABLENESS IN INTERNATIONAL LAW, IN MAX PLANCK ENCYCLOPEDIA OF PUB. INT’L L. para. 17 (2013).

<sup>163</sup> Vienna Convention on the Law of Treaties, art. 31(3)(c), May 23, 1969, 1155 U.N.T.S. 331.

<sup>164</sup> Maria L. Banda, *Regime Congruence: Rethinking the Scope of State Responsibility for Transboundary Environmental Harm*, 103 MINN. L. REV. 1879, 1944 (2019).

<sup>165</sup> Convention on the Law of the Non-Navigational Uses of International Watercourses, art. 10(2), May 21, 1997 (“vital human needs”); U. N. Convention



*B. Development of Other Areas of Law*

Despite its potentially monumental consequences for each, the misuse of shared natural resources pushes the prescriptive limits of international human rights law, international criminal law, and the UN Charter. In doing so, it underscores the need for further legal development across three different issue areas. First, it should further spur the evolution and progression of theories of extraterritorial jurisdiction in human rights and criminal law. Second, transboundary resources stand as vivid examples of how the human rights objectives of one state can be at the expense of human rights in another state, necessitating a means of reconciliation. Third, appreciation of this class of transboundary harm begs further elucidation as to the forms of non-kinetic action that may be considered “attacks” under the Rome Statute and “uses of force” under the UN Charter.

*1. Extraterritorial Jurisdiction*

Shared natural resources test the jurisdictional boundaries of international human rights law and international criminal law. As described above, the jurisdictional models based on spatial and personal control favored by human rights tribunals are a poor fit for transboundary harms. This realization should provide further support for the movement to abandon these antiquated paradigms in exchange for a more flexible framework. In international criminal law, the expansion of universal jurisdiction and recent extraterritorial applications of the Rome Statute present paths to criminalizing transboundary harms.

*i. Human Rights: Functionalism Bounded by Causal and Quantitative Limits*

The alternative jurisdiction approaches put forward by Milanovic and Shany both mark potential new directions that would better capacitate human rights law to address transboundary harms. Under Milanovic’s negative rights theory, resource-sharing states would be obligated to refrain from interfering with the enjoyment of

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on the Law of the Sea, art. 146, Dec. 10, 1982, 1833 U.N.T.S. 397 (“the protection of human life”); Convention on Wetlands of International Importance especially as Waterfowl Habitat, preamble (Feb. 2, 1971) (“the interdependence of man and his environment”).

human rights extraterritorially. And according to Shany's functionalism, states would be obligated to avert human rights violations of all types to the extent that they are capable. But both of these frameworks are in want of a limiting principle—how far must states go in advancing human rights beyond their borders? In a globalized world, domestic policymaking frequently has international human rights consequences, especially on environmental issues. Some standard is required to distinguish permissible resource utilizations with tolerable transboundary effects from other resource utilizations that unlawfully imperil human rights in neighboring states.

Shany proposes drawing the line on extraterritorial human rights responsibilities at harms that are “direct, significant, and foreseeable.”<sup>166</sup> Fittingly, this equation incorporates both causal and quantitative variables and employs terms that are well-defined in international law. Accounting for the quantum of harm in this context is appropriate because in both treaty and customary law regarding transboundary environmental harms, *sic utere* tolerates a minimum threshold of damage.<sup>167</sup> As noted above, “significant” harms may be less severe than “serious” or “substantial” harms.<sup>168</sup>

Causal attribution in international law is context-dependent and may vary according to the purpose of the rule that has been breached and the intention of the offending state.<sup>169</sup> “Direct” is often associated with factual causality, for which international tribunals commonly apply a but-for test.<sup>170</sup> That is, the cause must be necessary for the effect. “Foreseeability” instead refers to legal causality and is linked to the proximity or remoteness of harm.<sup>171</sup> It is evaluated based on what was known to the actor at the time of the conduct.<sup>172</sup> Taken

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<sup>166</sup> Yuval Shany, *Taking Universality Seriously: A Functional Approach to Extraterritoriality in International Human Rights*, 7 L. & ETHICS OF HUMAN RTS. 47, 68–9 (2013).

<sup>167</sup> Thomas W. Merrill, *Golden Rules for Transboundary Pollution*, 46 DUKE L. J. 931, 952 (1997).

<sup>168</sup> Int'l L. Comm'n, *Draft Articles on the Law of Transboundary Aquifers, with Commentaries*, 30, 60<sup>th</sup> Sess. (2008).

<sup>169</sup> Int'l L. Comm'n, *Draft Articles on Responsibility of States for Internationally Wrongful Acts, with Commentaries*, art. 31, cmt. 10, 53<sup>rd</sup> Sess. (2001)

<sup>170</sup> Martin Jarrett, *Causation in International Investment Law*, *JUS MUNDI* (Oct. 27, 2020), <https://jusmundi.com/en/document/wiki/en-causation-in-international-investment-law>.

<sup>171</sup> *Id.*

<sup>172</sup> *Id.*

together, “direct, significant, and foreseeable” serves as a logical and workable scheme that would allow international human rights law to address transboundary harms without imposing undue burdens upon states.

ii. Criminal Law: Universal Jurisdiction and the Rome Statute

The possibility that the gross misuse of transboundary resources could amount to an international crime also challenges the reach of international criminal law. Traditionally, international law recognizes criminal jurisdiction based on territory, nationality, or some other tie to the state.<sup>173</sup> However, numerous international treaties make special jurisdictional allowances for offenses with which the state may have no relation. These include crimes such as genocide,<sup>174</sup> war crimes,<sup>175</sup> and torture<sup>176</sup> which are considered so grave as to offend all of humanity, rendering the perpetrators *hostes humani generis*. It also includes crimes that are transnational in nature and contravene the law of nations (*delicta juris gentium*), such as piracy,<sup>177</sup> terrorism,<sup>178</sup>

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<sup>173</sup> Charles Chernor Jalloh, *A Proposal for the International Law Commission to Study Universal Criminal Jurisdiction*, 2018 AFR. J. INT'L CRIM. JUST. 51, 52 (2018).

<sup>174</sup> Convention on the Prevention and Punishment of the Crime of Genocide, art. 6–7, Dec. 9, 1948, 78 U.N.T.S. 277.

<sup>175</sup> First Additional Protocol to the 1949 Geneva Convention, art. 85, June 8, 1977, 1125 U.N.T.S. 3 ; First Geneva Convention, art. 49, Aug. 12, 1949, 75 U.N.T.S. 31 ; Second Geneva Convention, art. 50, Aug. 12, 1949, 75 U.N.T.S. 85; Third Geneva Convention, art. 129, Aug. 12, 1949, 75 U.N.T.S. 135; Fourth Geneva Convention, art. 146, Aug. 12, 1949, 75 U.N.T.S. 287.

<sup>176</sup> Convention Against Torture and Other Cruel, Inhuman, or Degrading Treatment or Punishment, art. 5–7, Dec. 10, 1984, 1465 U.N.T.S. 85.

<sup>177</sup> Code of Conduct Concerning the Repression of Piracy and Armed Robbery against Ships in the Western Indian Ocean and the Gulf of Aden, art. 4 (Jan. 29, 2009), <https://wwwcdn.imo.org/localresources/en/OurWork/Security/Documents/DCoC%20English.pdf>.

<sup>178</sup> International Convention for the Suppression of Terrorist Bombings, art. 6–7, Dec. 15, 1997, 2149 U.N.T.S. 256; International Convention for the Suppression of the Financing of Terrorism, art. 7–9, Apr. 10, 2002, 2178 U.N.T.S. 197.

hostage-taking,<sup>179</sup> currency counterfeiting,<sup>180</sup> drug trafficking,<sup>181</sup> and airplane hijacking.<sup>182</sup> These conventions generally require member states to investigate and either prosecute or extradite culprits that may be present within their jurisdiction, even if they otherwise have no connection to the crime.

Despite its transboundary implications, no treaty imposes similar obligations upon states to punish crimes against the natural environment as *delicta juris gentium*. However, many states have embraced the principle of universal jurisdiction in their domestic law, enabling them to prosecute international crimes under domestic law without a jurisdictional hook.<sup>183</sup> At the international level, the ICC implicitly recognized that crimes against humanity may be committed transnationally in its 2019 authorization of an investigation into the situation in Bangladesh and Myanmar. In that decision, the Court held that it may take jurisdiction when any part of the criminal conduct occurs within the territory of a state party.<sup>184</sup> This ruling lays the groundwork for future extraterritorial applications of the Rome Statute, such as for crimes against humanity occasioned by resource deprivation.

## 2. *Conflict of Human Rights*

Interstate competition over shared natural resources may bring human rights into conflict. For example, the fulfillment of the right to development in one state by exploitation of a transboundary resource may obstruct the rights to food, water, and other related rights in another state. International human rights law does not stipulate a clear method for resolving this tension, which undermines its aspirations to

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<sup>179</sup> Convention Against the Taking of Hostages, art. 5, Dec. 17, 1979, 1316 U.N.T.S. 206.

<sup>180</sup> International Convention for the Suppression of Counterfeiting Currency, art. 17, Apr. 20, 1929, 112 League of Nations Treaty Series 371.

<sup>181</sup> UN Convention Against Illicit Traffic in Narcotic Drugs and Psychotropic Substances, art. 4, 1988, 1582 U.N.T.S. 95.

<sup>182</sup> Hague Convention for the Suppression of Unlawful Seizure of Aircraft, art. 4, 1971, 860 U.N.T.S. 105.

<sup>183</sup> Jalloh, *supra* note 172, at 51-52.

<sup>184</sup> *Situation in the People's Republic of Bangladesh/Republic of the Union of Myanmar*, Case No. ICC-01/19, paras. 46-62 (Nov. 14, 2019), [https://www.icc-cpi.int/CourtRecords/CR2019\\_06955.PDF](https://www.icc-cpi.int/CourtRecords/CR2019_06955.PDF) (Decision Pursuant to Article 15 of the Rome Statute on the Authorization of an Investigation into the Situation in the People's Republic of Bangladesh/Republic of the Union of Myanmar.).

the universality and mutual compatibility of rights.<sup>185</sup> Rather, practitioners are left to construct ad hoc standards based on a balancing of the interests.<sup>186</sup>

The German Constitutional Court has innovated a model for reaching compromise in these situations called “practical concordance.” It entails a weighing of several different factors: a) the impact or degree of harm to the right, b) the centrality of the harm to the interests protected by the right, c) the involvement of additional rights, d) the effect on a general interest bearing on human rights, e) the alignment of the invocation of the right with the right’s intended purpose, and f) the objective fairness of the manner in which the right has been exercised.<sup>187</sup> The relative importance of these factors depends on the context.

Another means of resolving rights conflicts would be to differentiate between the distinct responsibilities to respect, protect, and fulfill human rights. The responsibility to respect is the state’s obligation to “refrain from interfering with or curtailing the enjoyment of human rights;” protection of human rights requires the state to defend against abuses committed by third parties; to fulfill human rights the state “must take positive action to facilitate the[ir] enjoyment.”<sup>188</sup> This tripartite framework is not enshrined in treaty law; in fact, many human rights treaties do not explicitly mention an obligation to respect at all.<sup>189</sup> However, it has been widely referenced by the CESCR and represents the standard modern understanding.<sup>190</sup>

The notions of respect, protection, and fulfillment of human rights were conceived by the UN in order to remedy the “false

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<sup>185</sup> Peter G. Danchin, *Of Prophets and Proselytes: Freedom of Religion and the Conflict of Rights in International Law*, 49 *HARV. INT’L L. J.* 249, 277 (2008).

<sup>186</sup> Nicolas A.J. Croquet, *The Special Tribunal for Lebanon’s Innovative Human Rights Framework: Between Enhanced Legislative Codification and Increased Judicial Lawmaking*, 47 *GEO. J. INT’L L.* 351, 410 (2016).

<sup>187</sup> Stijn Smet, *Freedom of Expression and the Right to Reputation: Human Rights in Conflict*, 26 *AM. U. INT’L L. REV.* 183, 188–92 (2010).

<sup>188</sup> *The Foundation of International Human Rights Law*, UNITED NATIONS [UN], <https://www.un.org/en/about-us/udhr/foundation-of-international-human-rights-law>.

<sup>189</sup> MILANOVIC, *supra* note 52, at 212–15.

<sup>190</sup> Karp, *supra* note 66, at 87.

dichotomy” between negative and positive rights.<sup>191</sup> The different duties instead exist on a spectrum between negative and positive obligations, with respect primarily demanding restraint and fulfillment mandating remedial action.<sup>192</sup> Recalling Milanovic’s insight that, from a functionalist perspective, it is easier for states to ensure negative rights,<sup>193</sup> it is therefore also true that it is usually easier for states to respect human rights than to protect or fulfill them.

Not only are states better-positioned to respect human rights as a practical matter, but their duty to respect may be stronger than the duties to protect or fulfill. The concept of respect for human rights as a distinct imperative originates in a libertarian impulse to minimize state meddling in the private sphere.<sup>194</sup> Political predilections toward this *laissez-faire* ideology among powerful states have led to the elevation of the duty to respect above the duties to protect and fulfill.<sup>195</sup> When rights are in conflict, obligations stemming from the duty to respect might therefore weigh heavier than those arising from the responsibilities to protect and fulfill. Thus, a duty not to cause environmental harm might overpower a conflicting duty to promote economic development.

### 3. *Non-Kinetic Force*

Lastly, an appreciation for the damage that may be inflicted by the misappropriation of shared natural resources should further stimulate debate over how international criminal law and the UN Charter regulate non-kinetic action. In particular, the term “attack” as employed by the Rome Statute in the definition of crimes against humanity and the terms “use of force” and “armed attack” in Articles 2 and 51 of the UN Charter have undergone an evolution in meaning in response to developments in the modern threat frontier. Many of the most menacing risks today—from climate change to cyber warfare to disease—are not strictly military or physical. Deciding when these perils will be considered “attacks” or “uses of force” under international law will be a critical and ongoing project for the international community in the decades to come. The benchmarks set

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<sup>191</sup> *Id.* at 84.

<sup>192</sup> *Id.* at 89.

<sup>193</sup> MILANOVIC, *supra* note 52, at 219.

<sup>194</sup> Karp, *supra* note 66, at 89.

<sup>195</sup> *Id.* at 90.

forth in the Tallinn Manual represent an invaluable contribution in this endeavor.

#### CONCLUSION

The mismanagement of shared natural resources may have acute consequences for international human rights law, international criminal law, and the UN Charter's provisions on the use of force. Depending on the operative theory of extraterritorial jurisdiction, it may threaten the rights to food, water, health, and life. In extreme cases, it may amount to a crime against humanity. And it may be an illegal use of force potentially justifying responsive action by aggrieved states. Apprehension of these legal implications in realms beyond environmental law can assist in the determination of which utilizations ought to be considered "equitable and reasonable." Moreover, the risk of transboundary harm caused by the short-sighted or cynical expropriation of shared resources calls for juridical reforms that would enable a comprehensive international-law response.

