

# CLIMATE CHANGE ADAPTATION AND THE LAW

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## ABSTRACT

This article questions the need for substantive legal developments aimed at promoting adaptation to the impacts of climate change. It does so by arguing that climate change adaptation should not be conceived of as a separate policy or legal field, but rather as a consideration to be mainstreamed in various policy and legal regimes. For instance, climate change adaptation should be integrated with disaster risk reduction, the protection of human rights, economic development, and ecological conservation. This method of integration is better than to view adaptation as a separate legal field, as it is likely impossible to attribute particular events (e.g., an individual’s migration or a disaster) to climate change. Overall, causal attribution is not relevant to determining how societies ought to respond to these events. If a “law” on adaptation is necessary, it is only as a minimal set of procedural norms aimed at ensuring that the objective of adapting to climate change is considered in other fields of law.

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## I. INTRODUCTION

Clear scientific evidence shows that our climate system is changing<sup>1</sup> due to anthropogenic emissions of greenhouse gases (GHGs).<sup>2</sup> The global average temperature has already increased by around 1°C above pre-industrial levels.<sup>3</sup> Climate change is causing widespread impacts, ranging from slow-onset environmental changes such as sea level rise<sup>4</sup> and desertification,<sup>5</sup> to an increase in the frequency and severity of extreme weather events.<sup>6</sup> It thus affects multiple ecological and social systems, with far-reaching consequences for the enjoyment of human rights<sup>7</sup> and general human welfare.<sup>8</sup>

There are two main ways societies can respond to climate change. On the one hand, governments can mitigate climate change by reducing

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<sup>1</sup> IPCC, *Summary for Policymakers*, in CLIMATE CHANGE 2013: THE PHYSICAL SCIENCE BASIS. THE WORKING GROUP I CONTRIBUTION TO THE FIFTH ASSESSMENT REPORT OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE 1, 4-5 (2013), <https://www.ipcc.ch/report/ar5/wg1/>.

<sup>2</sup> *Id.* at 15-17.

<sup>3</sup> IPCC, *Summary for Policymakers*, in GLOBAL WARMING OF 1.5°C: AN IPCC SPECIAL REPORT ON THE IMPACTS OF GLOBAL WARMING OF 1.5°C ABOVE PRE-INDUSTRIAL LEVELS AND RELATED GLOBAL GREENHOUSE GAS EMISSION PATHWAYS, IN THE CONTEXT OF STRENGTHENING THE GLOBAL RESPONSE TO THE THREAT OF CLIMATE CHANGE, SUSTAINABLE DEVELOPMENT, AND EFFORTS TO ERADICATE POVERTY 1, 6 (2018), <https://www.ipcc.ch/sr15/>.

<sup>4</sup> IPCC, *Summary for Policymakers*, in CLIMATE CHANGE 2014: IMPACTS, ADAPTATION, AND VULNERABILITY, PART A: GLOBAL AND SECTORAL ASPECTS. THE WORKING GROUP II CONTRIBUTION TO THE FIFTH ASSESSMENT REPORT OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE 1, 17 (2014), available at <https://www.ipcc.ch/report/ar5/wg2/> [hereinafter CLIMATE CHANGE 2014].

<sup>5</sup> *Id.* at 14.

<sup>6</sup> *Id.* at 12.

<sup>7</sup> See generally John H. Knox (Special Rapporteur on the Issue of Human Rights Obligations), *Human Rights Obligations Relating to the Enjoyment of a Safe, Clean, Healthy and Sustainable Environment*, U.N. Doc. A/HRC/31/52 (Feb. 1, 2016); Stephen Humphreys, *Competing Claims: Human Rights and Climate Harms*, in HUMAN RIGHTS AND CLIMATE CHANGE 37 (Stephen Humphreys ed., 2009).

<sup>8</sup> See, e.g., Richard S.J. Tol, *The Economic Impacts of Climate Change*, 12 REV. OF ENV'T ECON. & POL'Y 1, 4 (2018).

GHG emissions.<sup>9</sup> For example, some states incentivize emission reduction by introducing carbon taxes<sup>10</sup> or establishing cap-and-trade mechanisms,<sup>11</sup> while also imposing command-and-control regulations on various economic sectors.<sup>12</sup> On the other hand, societies can take measures to adapt to climate change, either by enhancing the resilience of individuals and assets to the physical impacts of climate change, or by reducing their exposure and vulnerability to such impacts.<sup>13</sup> Mitigation and adaptation are not alternative priorities—societies must both adapt to the impacts of climate change that are already taking place *and* simultaneously reduce their GHG emissions in order to prevent more severe impacts for which adaptation alone would not be a realistic option.<sup>14</sup>

A parallel is often drawn between mitigation and adaptation, leading to a general sense that these two priorities are to be pursued in similar ways—particularly, through international cooperation. For instance, the U.N. General Assembly has affirmed that “[t]he global nature of climate change calls for the widest possible international cooperation aimed at accelerating the reduction of global [GHG] emissions and addressing adaptation to the adverse impacts of climate change.”<sup>15</sup> The United Nations Framework Convention on Climate Change (UNFCCC) requires each of its parties to formulate and implement “measures to mitigate climate change . . . and measures to facilitate adequate adaptation to climate change.”<sup>16</sup> The Paris Agreement defines a (mitigation) objective of holding the increase in global temperature “well below” 2°C and possibly close to 1.5°C above preindustrial levels and an (adaptation) objective of “[i]ncreasing the ability to adapt to the

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<sup>9</sup> For the sake of simplicity, I refer in this paper to net emissions. Thus, reducing emissions includes enhancing sinks and reservoirs of GHGs.

<sup>10</sup> See, e.g., Carbon Tax Act, S.B.C. 2008, c 40 (Can. B.C.); Carbon Pricing Act 2018, No. 23 (Sing.).

<sup>11</sup> See, e.g., Parliament and Council Directive 2003/87, 2003 O.J. (L 275) 32 (EC) (establishing the European Union’s cap-and-trade program). See generally Harro van Asselt, *The Design and Implementation of Greenhouse Gas Emissions Trading*, in *THE OXFORD HANDBOOK OF INTERNATIONAL CLIMATE CHANGE LAW* 332 (Kevin R. Gray, Richard Tarasofsky & Cinnamon P. Carlarne eds., 2016).

<sup>12</sup> See, e.g., Parliament and Council Regulation 2019/1242, 2019 O.J. (L 198) 202 (EU) (heavy-duty vehicles); Parliament and Council Regulation 2019/631, 2019 O.J. (L 111) 13 (EU) (passenger cars and light commercial vehicles).

<sup>13</sup> See generally CLIMATE CHANGE 2014, *supra* note 4, at 3–5.

<sup>14</sup> See Christopher B. Field et al., *Technical Summary*, in CLIMATE CHANGE 2014, *supra* note 4, at 93.

<sup>15</sup> G.A. Res. 70/1, Transforming Our World: The 2030 Agenda for Sustainable Development, ¶ 31 (Sept. 25, 2015).

<sup>16</sup> United Nations Framework Convention on Climate Change art. 4(1)(b), May 9, 1992, S. Treaty Doc No. 102–38, 1771 U.N.T.S. 107 [hereinafter UNFCCC].

adverse impacts of climate change.”<sup>17</sup> Of the 167 first intended nationally determined contributions communicated in the run-up to the Paris summit, the UNFCCC Secretariat reported that 137 included an adaptation component in addition to their mitigation targets.<sup>18</sup>

Likewise, law and policy scholars have repeatedly suggested that, just as action on climate change mitigation relies on substantive legal rules and principles,<sup>19</sup> there *is, will soon be, or at any rate ought to be,* a legal field aimed at promoting adaptation to climate change.<sup>20</sup> Similar to mitigation law, climate change adaptation law would consist of a set of substantive rules and principles in domestic and international law that create rules and, in particular, obligations applicable to national authorities and possibly some other actors. Legal scholars, highlighting the urgency of adapting to climate change, have called for “a new legal framework”<sup>21</sup> to be created, assuming that a dedicated legal field would be either the only way or necessarily the “best tool,”<sup>22</sup> for prompting public authorities to take action on adaptation. Attempts have also been made to determine how to “measure” adaptation as a way to facilitate an international monitoring and review of national adaptation action.<sup>23</sup> This

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<sup>17</sup> Paris Agreement art. 2(1)(a)–(b), Dec. 12, 2015, 55 I.L.M. 740. See also the parallel between the global objective on mitigation and the “global goal on adaptation” defined in *id.* arts. 4(1) and 7(1).

<sup>18</sup> Rep. of the UNFCCC Secretariat, Aggregate Effect of the Intended Nationally Determined Contributions: An Update, ¶¶ 7, 59, U.N. Doc. FCCC/CP/2016/2 (May 2, 2016). See also UNFCCC Dec. 1/CP.19, Further Advancing the Durban Platform, U.N. Doc. FCCC/CP/2013/10/Add.1, ¶ 2(b) (Jan. 31, 2014); UNFCCC Dec. 1/CP.20, Lima Call for Climate Action, U.N. Doc. FCCC/CP/2014/10/Add.1, ¶ 9 (Feb. 2, 2015); and UNFCCC Dec. 1/CP.21, Adoption of the Paris Agreement, U.N. Doc. FCCC/CP/2015/10/Add.1, ¶ 13 (Jan. 29, 2016), each calling on States to prepare and communicate their intended nationally determined contribution towards achieving the objective of the UNFCCC, namely the mitigation of climate change.

<sup>19</sup> See, e.g., Kyoto Protocol to the UNFCCC art. 3(1), Dec. 10, 1997, 2303 U.N.T.S. 162 [hereinafter Kyoto Protocol]; Paris Agreement, *supra* note 17, art. 4(2); and references cited *supra* notes 10–12. See also Benoit Mayer, *International Action on Climate Change Mitigation*, in THE INTERNATIONAL LAW ON CLIMATE CHANGE 108–31 (2018).

<sup>20</sup> See, e.g., Anne Saab, *Climate-Resilient Crops and International Climate Change Adaptation Law*, 29 LEIDEN J. OF INT’L L. 503 (2016); Maria L. Banda, *Climate Adaptation Law: Governing Multi-Level Public Goods Across Borders*, 51 VAND. J. OF TRANSNAT’L L. 1027 (2018); RESEARCH HANDBOOK ON CLIMATE CHANGE ADAPTATION LAW (Jonathan Verschuuren ed., 2013).

<sup>21</sup> Robin Kundis Craig, “Stationarity is Dead” — Long Live Transformation: Five Principles for Climate Change Adaptation Law, 34 HARV. ENV’T. L. REV. 9, 16–17 (2010).

<sup>22</sup> Jan McDonald, *Creating Legislative Frameworks for Adaptation*, in CLIMATE ADAPTATION FUTURES 126, 128 (Jean Palutikof et al. eds., 2013).

<sup>23</sup> See, e.g., Brianna Craft & Susannah Fisher, *Measuring the Adaptation Goal in the Global Stocktake of the Paris Agreement*, 18 CLIMATE POL’Y 1203 (2018); Alexandre K. Magnan & Teresa Ribera, *Global Adaptation after Paris*, 352 SCI. 1280 (2016); James D. Ford, Lea Berrang-Ford, Alex Lesnikowski, Magda Barrera & S. Jody Heymann, *How to Track Adaptation to Climate Change: A Typology of Approaches for National-Level Application*, 18 ECOLOGY & SOC’Y 40 (2013).

“measurement” would work much in the same way as the international institutions and processes that track the implementation of national commitments on mitigation action and of the evolution of states’ GHG emissions.<sup>24</sup>

Even more frequently, scholars have pleaded for the adoption of substantive norms that would seek to address particular impacts of climate change. Specifically, many scholars have called for a legal protection of “climate migrants,” whether through the adoption of a specific treaty,<sup>25</sup> reforms of existing treaties,<sup>26</sup> or otherwise (e.g., through “soft-law” instruments).<sup>27</sup> Others have framed “climate disasters” as an issue requiring specific legal and policy responses.<sup>28</sup> At times, the impacts of climate change on public health have also been presented as a distinct governance issue.<sup>29</sup>

This article questions the existence of, and the need for, a law on climate change adaptation. To be perfectly clear, this article does not challenge the need to adapt to climate change, nor the important role

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<sup>24</sup> See UNFCCC, *supra* note 16, art. 12; Kyoto Protocol, *supra* note 19, arts. 5, 7; Paris Agreement, *supra* note 17, art. 13. For an overview of rules on monitoring, reporting and verification and on transparency in the context of mitigation action, see generally Benoit Mayer, *Transparency Under the Paris Rulebook: Is the Transparency Framework Truly Enhanced?*, 9 CLIMATE L. 40 (2019).

<sup>25</sup> See, e.g., Frank Biermann & Ingrid Boas, *Towards a Global Governance System to Protect Climate Migrants: Taking Stock*, in RESEARCH HANDBOOK ON CLIMATE CHANGE, MIGRATION AND THE LAW 405 (Benoit Mayer & François Crépeau eds., 2017); Bonnie Docherty & Tyler Giannini, *Confronting a Rising Tide: A Proposal for a Convention on Climate Change Refugees*, 33 HARV. ENV'T L. REV. 349 (2009).

<sup>26</sup> See, e.g., MATTHEW SCOTT, CLIMATE CHANGE, DISASTERS, AND THE REFUGEE CONVENTION (2020); MATTHEW SCOTT, *Climate Refugees and the 1951 Convention*, in RESEARCH HANDBOOK ON INTERNATIONAL REFUGEE LAW 343 (Satvinder Singh Juss ed., 2019).

<sup>27</sup> See, e.g., AVIDAN KENT & SIMON BEHRMAN, FACILITATING THE RESETTLEMENT AND RIGHTS OF CLIMATE REFUGEES: AN ARGUMENT FOR DEVELOPING EXISTING PRINCIPLES AND PRACTICES (2018); Michael Addaney, *The Legal Challenges of Offering Protection to Climate Refugees in Africa*, in GOVERNANCE, HUMAN RIGHTS, AND POLITICAL TRANSFORMATION IN AFRICA 333 (Michael Addaney, Michael Gyan Nyarko & Elsabé Boshoff eds., 2020); CLIMATE REFUGEES: BEYOND THE LEGAL IMPASSE? (Simon Behrman & Avidan Kent eds., 2018); CLIMATE CHANGE, MIGRATION AND HUMAN RIGHTS: LAW AND POLICY PERSPECTIVES (Dimitra Manou, Andrew Baldwin, Dug Cubie, Anja Mihr & Teresa Thorp eds., 2017); JANE MCADAM, CLIMATE CHANGE, FORCED MIGRATION, AND INTERNATIONAL LAW (2012); Jane McAdam, *Swimming Against the Tide: Why a Climate Change Displacement Treaty is Not the Answer*, 23 INT'L J. OF REFUGEE L. 2 (2011); Benoit Mayer, *The International Legal Challenges of Climate-Induced Migration: Proposal for an International Legal Framework*, 22 COLO. J. INT'L ENV'T L. & POL'Y 357 (2011).

<sup>28</sup> See, e.g., ROSEMARY LYSER, CLIMATE JUSTICE AND DISASTER LAW (2015); RESEARCH HANDBOOK ON CLIMATE DISASTER LAW (Rosemary Lyster & Robert R.M. Verchick eds., 2018).

<sup>29</sup> See, e.g., CLIMATE CHANGE, PUBLIC HEALTH, AND THE LAW (Michael Burger & Justin Gundlach eds., 2018); Lindsay F. Wiley, *Moving Global Health Law Upstream: A Critical Appraisal of Global Health Law as a Tool for Health Adaptation to Climate Change*, 22 GEO. INT'L ENV'T L. REV. 439 (2010).

that states can and should play in pursuing this objective—the argument is only concerned with the way this objective is to be pursued. This article does not intend to cast any doubt on the need to take climate change adaptation into account by reforming various existing legal fields (e.g., rules on urban planning and littoral property). In fact, this article accepts that some legal provisions have been taken or are needed, such as in the form of amendments to existing statutes. Rather, what this article questions is the need for a distinct set of substantive rules and principles dedicated to promoting climate change adaptation—in short, a field of “climate change adaptation law.” Climate change adaptation is and needs to be reflected in the law but, this article argues, not through distinct substantive norms. Substantive norms applicable to the impacts of climate change fall within the scope of disaster-risk reduction, human rights protection, economic development, and ecological conservation, among other existing legal and institutional fields, but the need to adapt to climate change does not justify reinventing the wheel. The relevant laws and institutions in these fields could often be improved, but there is no reason to create a parallel legal regime, for instance, to protect a population of migrants or to reduce the risk of a type of disaster which would be attributed to climate change.

The next section looks further into the concept of adaptation—in particular, its origins in international negotiations, its definition, and its relations with the law. Section III shows that climate change adaptation has not emerged as a distinct legal field; contrary to what specialized legal scholars have sometimes suggested, international and domestic law hardly defines any substantive right or obligation relating to climate change adaptation. Section IV turns to arguments about what the law ought to be. It refutes the three most likely arguments in favor of a law on climate change adaptation—arguments that frame this putative field of law as the response to a collective action problem, the management of phenomena attributable to climate change, and a way to convey reparations for the injury that some states’ GHG emissions have caused other states.

## II. THE CONCEPT OF ADAPTATION TO CLIMATE CHANGE

This section provides a background analysis of the concept of adaptation. First, it recounts how the concept emerged in UNFCCC negotiations. Second, it attempts to define this concept. Third, it begins exploring the conceptual links between adaptation and the law.

*A. The UNFCCC Regime's Increasing Emphasis on Climate Change Adaptation*

The main focus of climate law has long been the mitigation of climate change. Thus, the UNFCCC's ultimate objective is unmistakably a mitigation objective—to stabilize GHG concentrations in the atmosphere “at a level that would prevent dangerous anthropogenic interference with the climate system.”<sup>30</sup> This objective mentions adaptation, but merely as a natural phenomenon, a benchmark to determine what is to be considered “dangerous;” climate change mitigation should be achieved “within a time-frame sufficient to allow ecosystems to *adapt* naturally to climate change.”<sup>31</sup> Nonetheless, the UNFCCC does mention adaptation in some commitments, albeit vaguely defined. In particular, states are required to adopt “measures to facilitate adequate adaptation to climate change”<sup>32</sup> and to “[c]ooperate in preparing for adaptation to the impacts of climate change.”<sup>33</sup> The developed countries included in Annex II further committed to contributing financially to adaptation in developing countries.<sup>34</sup>

Likewise, the Kyoto Protocol focused essentially on climate change mitigation by requiring each developed country party included in Annex I of the UNFCCC to achieve a quantified emission limitation or reduction commitment.<sup>35</sup> Some provisions of the Protocol reaffirmed the provisions of the UNFCCC on the adoption of measures to “facilitate adequate adaptation to climate change,”<sup>36</sup> adding only that “adaptation technologies and methods for improving spatial planning would improve adaptation to climate change.”<sup>37</sup> An Adaptation Fund was established to channel a share of the proceeds of the Clean Development Mechanism—a procedure allowing developed states to implement mitigation action in developing states—in order to “assist developing country Parties that are particularly vulnerable to the adverse effects of climate change to meet the costs of adaptation.”<sup>38</sup>

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<sup>30</sup> UNFCCC, *supra* note 16, art. 2.

<sup>31</sup> *Id.* (emphasis added).

<sup>32</sup> *Id.* art. 4(1)(b).

<sup>33</sup> *Id.* art. 4(1)(e).

<sup>34</sup> *Id.* art. 4(4). The UNFCCC splits Parties into three groups: (1) Annex I, which includes the industrialized countries that were members of the OECD in 1992 plus countries with “economies in transition” (2) Annex II, which consists of just the OECD industrialized countries from Annex I, and (3) non-Annex I countries, which are mostly developing countries. See UNFCCC, *Parties & Observers*, <https://unfccc.int/parties-observers> (last visited July 24, 2021).

<sup>35</sup> Kyoto Protocol, *supra* note 19, art. 3.

<sup>36</sup> *Id.* art. 10(b).

<sup>37</sup> *Id.* art. 10(b)(i).

<sup>38</sup> *Id.* art. 12(8).

Over time, states have agreed on a stronger emphasis on adaptation, often as part of “package deals,” whereby developed country parties offered some concessions to developing country parties in exchange for enhanced mitigation commitments.<sup>39</sup> In particular, the 2007 Bali Action Plan and the 2010 Cancún Agreements called for “enhanced action” on climate change adaptation while also considering the role of developing states in enhanced international cooperation on climate change mitigation.<sup>40</sup> The Paris Agreement included an adaptation objective, sandwiched between a mitigation objective and a finance objective, of “[i]ncreasing the ability to adapt to the adverse impacts of climate change.”<sup>41</sup> A dedicated article, Article 7, specifies “the global goal . . . of enhancing adaptive capacity, strengthening resilience and reducing vulnerability to climate change.”<sup>42</sup> Article 7 further asserts that “adaptation is a global challenge faced by all with local, subnational, national, regional and international dimensions”<sup>43</sup> and that “adaptation efforts of developing country Parties shall be recognized.”<sup>44</sup> The article also affirms that “adaptation action should follow a country-driven, gender-responsive, participatory and fully transparent approach, taking into consideration vulnerable groups, communities and ecosystems.”<sup>45</sup>

Yet, this increasing emphasis on adaptation has come with little clarity about the meaning and implications of this concept. Treaty provisions and Conference of the Parties (COP) decisions<sup>46</sup> suggest that international cooperation on climate change adaptation is not just remedial (finance is only a component of it), nor does it intend to be substantive (adaptation action should “follow a country-driven . . . approach”),<sup>47</sup> begging questions as to what precisely international legal provisions on adaptation seek to achieve. In fact, most treaty provisions or COP decisions on climate change adaptation range from hortatory to nugatory, imposing few if any obligations on

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<sup>39</sup> See Nina Hall & Åsa Persson, *Global Climate Adaptation Governance: Why Is It Not Legally Binding?*, 24 EUR. J. INT’L RELS. 540, 557–58 (2018); DANIEL BODANSKY, JUTTA BRUNNÉE & LAVANYA RAJAMANI, INTERNATIONAL CLIMATE CHANGE LAW 237 (2017).

<sup>40</sup> UNFCCC Dec. 1/CP.13, Bali Action Plan, U.N. Doc. FCCC/CP/2007/6/Add.1, ¶ 1(c) (Mar. 14, 2008); UNFCCC Dec. 1/CP.16, Cancun Agreements, U.N. Doc. FCCC/CP/2010/7/Add.1, ¶¶ 11–35 (Mar. 15, 2011).

<sup>41</sup> Paris Agreement, *supra* note 17, art. 2(1)(b).

<sup>42</sup> *Id.* art. 7(1).

<sup>43</sup> *Id.* art. 7(2).

<sup>44</sup> *Id.* art. 7(3).

<sup>45</sup> *Id.* art. 7(5).

<sup>46</sup> The Conference of the Parties is the “supreme body” of the UNFCCC, tasked with “keep[ing] under regular review the implementation of the Convention and any related legal instruments.” UNFCCC, *supra* note 16, art. 7(2).

<sup>47</sup> Paris Agreement, *supra* note 17, art. 7(5).



states,<sup>48</sup> while nevertheless requiring them to adopt measures and report on their implementation. On the domestic plane, meanwhile, it is noteworthy that virtually no state appears to have adopted any dedicated statutory law on climate change adaptation; states, rather, have mainstreamed climate change adaptation in various aspects of their sustainable development efforts.<sup>49</sup>

### B. Defining Adaptation

The IPCC's Fifth Assessment Report defines adaptation as "[t]he process of adjustment to actual or expected climate and its effects" in order "to moderate or avoid harm or exploit beneficial opportunities."<sup>50</sup> The IPCC changed its previous definition of adaptation in order to reflect what the IPCC presents as "progress in science."<sup>51</sup> The Fourth Assessment Report defined adaptation as measures "to reduce the vulnerability" of human systems.<sup>52</sup> This left open the question of the inclusion of measures on human migration, displacement, and relocation, which aim at reducing exposure rather than vulnerability.<sup>53</sup> The new definition clarifies that adaptation includes any measure that seeks to reduce the harm caused by climate change, including through human mobility.

Early international policy debates sometimes featured mitigation and adaptation as competing priorities, or otherwise approached adaptation as merely a natural phenomenon.<sup>54</sup> In contrast, there is now a relative consensus among scholars and state representatives that adaptation policies are an essential complement to mitigation action.<sup>55</sup> It is also accepted that adaptation could be prompted "through complementary actions across levels, from individuals to governments."<sup>56</sup> The IPCC and

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<sup>48</sup> See further discussion in section III.A *infra*.

<sup>49</sup> See section III.B *infra*.

<sup>50</sup> IPCC, CLIMATE CHANGE 2014: SYNTHESIS REPORT. CONTRIBUTION OF WORKING GROUPS I, II AND III TO THE FIFTH ASSESSMENT REPORT OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE 118 (2014).

<sup>51</sup> *Id.* at 118 n.1.

<sup>52</sup> IPCC, CLIMATE CHANGE 2007: SYNTHESIS REPORT. CONTRIBUTION OF WORKING GROUPS I, II AND III TO THE FOURTH ASSESSMENT REPORT OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE 76 (2007).

<sup>53</sup> In the IPCC conceptual framework, vulnerability and exposure are two independent factors that define the risk of impacts. See, e.g., Field et al., *supra* note 14, at 37. See generally François Gemenne & Julia Blocher, *How Can Migration Serve Adaptation to Climate Change? Challenges to Fleshing Out a Policy Ideal*, 183 GEOGRAPHICAL J. 336 (2017).

<sup>54</sup> Robert W. Kates, *Cautionary Tales: Adaptation and the Global Poor*, 45 CLIMATIC CHANGE 5, 5–6 (2000); E. Lisa F. Schipper, *Conceptual History of Adaptation in the UNFCCC Process*, 15 REV. EUR. CMTY. & INT'L ENV'T L. 82, 83–84 (2006).

<sup>55</sup> See Field et al., *supra* note 14, at 93–94.

<sup>56</sup> *Id.* at 85.

scholars have highlighted the complementary roles of national and sub-national governments, the private sector, communities, households, and civil society in promoting adaptation.<sup>57</sup> Jan McDonald points out the importance of regulation “when future climate impacts are potentially irreversible or the costs of preventive measures are significantly lower than longer-term remedial efforts.”<sup>58</sup> She also notes the role that law could play in “erecting the legal architecture to support fiscal policies for adaptation, such as subsidies, rebates or other incentives.”<sup>59</sup>

Adaptation is not just about *preserving* societies in their current state; rather, it always implies a *transformative* project.<sup>60</sup> Adaptation suggests value judgments about what “adapted societies” ought to be like—or, more concretely, about what needs to be protected from the impacts of climate change (e.g., human lives, property, or ecological resources) with what level of priority and at what costs, and what can be forfeited.<sup>61</sup> Thus, framing an adaptation strategy involves an arbitrage between different types of resources or different levels of risk. Societies may have different levels of readiness and ability to pay for measures that reduce casualties; they may also have different perceptions on the need to invest large amounts of resources to avoid a small chance of disastrous consequences.<sup>62</sup> Consequently, adaptation is not a purely technical matter best decided by experts;<sup>63</sup> it implies inherently political choices which, when they are made by a state, are best made through participatory and deliberative processes led by the political branches of the government.<sup>64</sup>

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<sup>57</sup> See, e.g., *id.*; Heleen L.P. Mees, Peter P.J. Driessen & Hens A.C. Runhaar, *Exploring the Scope of Public and Private Responsibilities for Climate Adaptation*, 14 J. ENV'T POL'Y & PLAN. 305 (2012); Lee Godden, Francine Rochford, Jacqueline Peel, Lisa Caripis & Rachel Carter, *Law, Governance and Risk: Deconstructing the Public-Private Divide in Climate Change Adaptation*, 36 UNSW L.J. 224 (2013); Daniel A. DeCaro, Brian C. Chaffin, Edella Schlager, Ahjond S. Garmestani & J.B. Ruhl, *Legal and Institutional Foundations of Adaptive Environmental Governance*, 22 ECOLOGY & SOC'Y 1 (2017).

<sup>58</sup> McDonald, *supra* note 22, at 126.

<sup>59</sup> *Id.* at 128.

<sup>60</sup> Craig, *supra* note 21, at 30.

<sup>61</sup> See generally Gigi Owen, *What Makes Climate Change Adaptation Effective? A Systematic Review of the Literature*, 62 GLOB. ENV'T CHANGE, May 2020, Article No. 102071, at 2.

<sup>62</sup> See, e.g., E. Michel-Kerjan et al., *Catastrophe Risk Models for Evaluating Disaster Risk Reduction Investments in Developing Countries*, 33 RISK ANALYSIS 984 (2013); Joost Buurman & Vladan Babovic, *Adaptation Pathways and Real Options Analysis: An Approach to Deep Uncertainty in Climate Change Adaptation Policies*, 35 POL'Y & SOC'Y 137 (2016).

<sup>63</sup> See generally Siri H. Eriksen, Andrea J. Nightingale & Hallie Eakin, *Reframing Adaptation: The Political Nature of Climate Change Adaptation*, 35 GLOB. ENV'T CHANGE 523 (2015); MIKE HULME, WHY WE DISAGREE ABOUT CLIMATE CHANGE: UNDERSTANDING CONTROVERSY, INACTION AND OPPORTUNITY (2009).

<sup>64</sup> See, e.g., Stephan Hügel & Anna R. Davies, *Public Participation, Engagement, and Climate Change Adaptation: A Review of the Research Literature*, 11 WIRES CLIMATE CHANGE,

It is difficult to delimit the scope of adaptation action. Adaptation is highly context-specific, “with no single approach for reducing risks appropriate across all settings.”<sup>65</sup> Robin Kundis Craig justly observes that “adaptation measures can be as broad-ranging as the scope of climate change impacts.”<sup>66</sup> These impacts, Craig highlights, are “ever-changing, often unpredictable, and subject to feedback mechanisms that may not be completely understood and that may change over time, often leading to nonlinear alterations of ecosystems and their services.”<sup>67</sup> Consequently, measures on climate change adaptation could extend to many different aspects of regulation. In practice, measures that are presented as adaptation action often relate to areas of governance typically associated with sustainable development, touching on issues of land use planning, agricultural policies, construction standards, freshwater management, poverty alleviation, public health policies, ecological conservation, and so on.<sup>68</sup>

Determining the scope of climate change adaptation raises questions about what can be concretely attributed to climate change. Contemporary debates on climate change adaptation are often influenced by scientific studies that seek to attribute particular extreme weather events (e.g., hurricanes, heatwaves or floods) to anthropogenic climate change.<sup>69</sup> One must keep in mind, however, that these studies are not uncontroversial in scientific circles. Critics have warned against the simplistic and misleading conclusions echoed in the media. Greg Lusk, for instance, noted that “[t]he attribution of specific events just doesn’t have the purported social benefits that motivate its use and development;”<sup>70</sup> in particular, event attribution “is unlikely to substantially contribute to litigation or adaptation.”<sup>71</sup> As event attribution is probabilistic, it can seldom determine that a weather event

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July/Aug. 2020, Article No. e645, at 12; Rebecca Romsdahl, Gwendolyn Blue & Andrei Kirilenko, *Action on Climate Change Requires Deliberative Framing at Local Governance Level*, 149 CLIMATIC CHANGE 277 (2018).

<sup>65</sup> Field et al., *supra* note 14, at 85.

<sup>66</sup> Craig, *supra* note 21, at 21.

<sup>67</sup> *Id.* at 29.

<sup>68</sup> See generally E.L.F. Schipper et al., *The Debate: Is Global Development Adapting to Climate Change?*, 18 WORLD DEV. PERSPS. 100205 (2020).

<sup>69</sup> See, e.g., Aglaé Jézéquel et al., *Behind the Veil of Extreme Event Attribution*, 149 CLIMATIC CHANGE 367 (2018).

<sup>70</sup> Friederike E.L. Otto & Greg Lusk, *Should Individual Extreme Weather Events Be Attributed to Human Agency?*, in CONTEMPORARY CLIMATE CHANGE DEBATES: A STUDENT PRIMER 36, 47 (Mike Hulme ed., 2019).

<sup>71</sup> Greg Lusk, *The Social Utility of Event Attribution: Liability, Adaptation, and Justice-Based Loss and Damage*, 143 CLIMATIC CHANGE 201, 201 (2017). See also Mike Hulme, *Attributing Weather Extremes to ‘Climate Change’: A Review*, 38 PROGRESS IN PHYSICAL GEOGRAPHY: EARTH & ENV’T 499 (2014).

could not have occurred *but for* climate change. This observation applies mainly to sudden-onset events whose likelihood is increasing in the context of climate change, but it may also apply to slow-onset events such as coastal flooding to some extent. The impacts of sea level rise, for now at least, cannot always be clearly distinguished from other factors that affect coastal flooding, such as erosion (natural and possibly exacerbated by human activities)<sup>72</sup> and subsidence (a natural phenomenon that can be exacerbated for instance by oil, gas, or groundwater extraction).<sup>73</sup>

Even when climate change can be construed as *the* cause of a physical event, the same may not be true of its social implications. Physical events, whether sudden or slow-onset, do not affect societies in a vacuum. It is common wisdom in disaster risk reduction circles that there is no such thing as an entirely “natural” disaster—a disaster only takes place when a society is vulnerable and exposed to a physical trigger.<sup>74</sup> Individuals are affected by a disaster because they are exposed to it (they are situated at the location where the disaster occurs) and vulnerable to it (for example, the house in which they live is not capable of resisting the event). Most of the time, observed variations in the impacts from extreme weather events have far more to do with social, economic, demographic, and other factors, than with climate change.<sup>75</sup>

As it is difficult to attribute events to climate change, it is also difficult “to distinguish climate adaptation from related activities, such as reducing risk to environmental disasters or alleviating poverty.”<sup>76</sup> What is considered as “adaptation action” typically relates to efforts aimed at reducing exposure and vulnerability to physical events that climate change makes more likely, such as strong hurricanes, drought, or coastal flooding. The outcomes of such measures, however, are never confined to climate change adaptation. For instance, new hurricane shelters are useful whenever a hurricane affects an area, whether or not the hurricane can be attributed to climate change. The policy objective of adapting to climate change may help justify the construction of new

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<sup>72</sup> See Poh Poh Wong et al., *Coastal Systems and Low-Lying Areas*, in CLIMATE CHANGE 2014, *supra* note 4, at 361, 372–74.

<sup>73</sup> See, e.g., *id.* at 369–70; H.Z. Abidin et al., *On Correlation Between Urban Development, Land Subsidence and Flooding Phenomena in Jakarta*, 370 PROCS. INT’L ASS’N OF HYDROLOGICAL SCIS. 15 (2015).

<sup>74</sup> See generally *supra* note 53.

<sup>75</sup> See, e.g., Field et al., *supra* note 14, at 71; Fabian Barthel & Eric Neumayer, *A Trend Analysis of Normalized Insured Damage from Natural Disasters*, 113 CLIMATIC CHANGE 215, 229–35 (2012).

<sup>76</sup> Owen, *supra* note 61, at 1.

hurricane shelters, but the ultimate decision must build on a broader disaster-risk management perspective.

### C. *The Connections between Adaptation and the Law*

The law relates to climate change adaptation in various ways.<sup>77</sup> First, it can hinder adaptation when it undermines stability in social relations (e.g., contracts) in a way that prevents spontaneous adaptation efforts. Craig Anthony Arnold, for instance, suggests that “[l]egal systems typically have not done a very good job at facilitating flexible responses to extraordinary situations that have many causes and effects and are continually changing.”<sup>78</sup> Second, legal norms can facilitate adaptation by introducing “more flexibility” to allow actors to adapt.<sup>79</sup> For example, as freshwater resources are set to change in unpredictable ways, arrangements to regulate their concurrent use among states, subnational governments, or private actors will often need to be reconsidered. Third, the law may incorporate new rules and principles aimed at promoting adaptation, in particular by regulating activities such as urban development or construction standards in order to reduce vulnerability and exposure to the impacts of climate change.

J.B. Ruhl and James Salzman have argued that the need to adapt to climate change challenges the assumption of stability underlying the law: in various aspects of governance, new norms must no longer be based entirely on the premise that the future will be like the past.<sup>80</sup> Thus, climate change adaptation will require the adaptation of various fields of the law, such as environmental law, water law, and land use law, or even rules and principles applicable to particular issues such as littoral property rights.<sup>81</sup> As Joseph Wenta, Jan McDonald, and Jeffrey McGee note, the adaptation of the law will take place through statutory reforms, but also possibly through the evolution of legal concepts and doctrines, including through precedents.<sup>82</sup> For instance, common law definitions of

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<sup>77</sup> See, e.g., Lea Berrang-Ford et al., *What Drives National Adaptation? A Global Assessment*, 124 CLIMATIC CHANGE 441 (2014).

<sup>78</sup> Craig Anthony Arnold, *Adaptive Law*, in RESEARCH HANDBOOK ON CLIMATE DISASTER LAW, *supra* note 28, at 169. See also Craig Anthony Arnold and Lance H. Gunderson, *Adaptive Law and Resilience*, 43 ENV'T L. REP. NEWS & ANALYSIS 10426 (2013); Alejandro E. Camacho, *Transforming the Means and Ends of Natural Resources Management*, 89 N.C. L. REV. 1405 (2011).

<sup>79</sup> Robin Kundis Craig et al., *Balancing Stability and Flexibility in Adaptive Governance: An Analysis of Tools Available in U.S. Environmental Law*, 22 ECOLOGY & SOC'Y, June 2017, at 1.

<sup>80</sup> J.B. Ruhl & James Salzman, *Climate Change Meets the Law of the Horse*, 62 DUKE L.J. 975, 992–93 (2013).

<sup>81</sup> *Id.* at 1010.

<sup>82</sup> Joseph Wenta, Jan McDonald & Jeffrey S. McGee, *Enhancing Resilience and Justice in Climate Adaptation Laws*, 8 TRANSNAT'L ENV'T L. 89, 108 (2019).

the duty of care in the law of negligence may have to develop in ways that take the foreseeable impacts of climate change into account.<sup>83</sup>

The observation that the law must adapt to climate change may appear obvious, almost banal. After all, the law is not cast in stone; it is constantly evolving in response to changes in the societies, economies, and environments in which it applies. Yet, climate change adaptation may call for more systematic evolution—not just a one-off reform, but a reform towards a more adaptive law, one which may, for instance, allow more discretion in the application of pre-existing rules when relevant circumstances have changed.<sup>84</sup> Procedural legal rules on adaptation could require that legal and policy reforms are considered on a regular basis—thus promoting a continuing evolution of the law in response to the changing circumstances in which it applies, including changes in the prevalent climatic conditions.

Beside the *adaptation of existing laws*, a more controversial question concerns the need to *adopt laws*—including substantive rules and principles—specifically dedicated to climate change adaptation,<sup>85</sup> and, more broadly, the need to create a new field of law<sup>86</sup> or policy,<sup>87</sup> or to overhaul institutions,<sup>88</sup> rather than merely mainstreaming certain considerations in existing fields and institutions. This question needs to be weighed in relation to climate change adaptation in general, but also in relation to its particular aspects, for instance in response to calls to treat “climate disasters” and “climate migration” as distinct governance issues.

Using an analogy with the contrived notion of a “horse law,” Ruhl and Salzman showed that applying the law to an issue does not necessarily involve the creation or imply the existence of a distinct legal field; no unique set of rules and principles arise when the law is applied to activities whose only commonality is that they involve horses, whether as meat or racing devices.<sup>89</sup> Ruhl and Salzman suggest that “[m]ost of law and legal institutions will see climate change adaptation

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<sup>83</sup> See generally R. Henry Weaver & Douglas A. Kysar, *Courting Disaster: Climate Change and the Adjudication of Catastrophe*, 93 NOTRE DAME L. REV. 295 (2017) (explaining the adaptation of tort law).

<sup>84</sup> Wenta, McDonald & McGee, *supra* note 82, at 107–09.

<sup>85</sup> See generally Victor B. Flatt, *Adapting Laws for a Changing World: A Systemic Approach to Climate Change Adaptation*, 64 FLA. L. REV. 269 (2012).

<sup>86</sup> See Ruhl & Salzman, *supra* note 80.

<sup>87</sup> See, e.g., Schipper et al., *supra* note 68.

<sup>88</sup> See, e.g., Thomas J. Timberlake & Courtney A. Schultz, *Policy, Practice, and Partnerships for Climate Change Adaptation on US National Forests*, 144 CLIMATIC CHANGE 257 (2017) (arguing for changes to current governance structures to better adapt to climate change, using the Forest Service as a case study).

<sup>89</sup> Ruhl & Salzman, *supra* note 80, at 985–90.

as just another set of challenging issues to work through the system.”<sup>90</sup> For land use law, for instance, “[c]limate change adaptation would just be a new purpose” justifying building restrictions.<sup>91</sup>

### III. THE PAUCITY OF LEGAL NORMS ON CLIMATE CHANGE ADAPTATION

This section argues that there is currently no distinct set of substantive rules and principles dedicated to promoting climate change adaptation. The literature on climate change adaptation and the law often assumes or asserts the existence of a law on climate change adaptation without demonstrating it.<sup>92</sup> Some authors concede the “inherent difficulty” that “adaptation measures have to be implemented through a wide range of policies,”<sup>93</sup> but then carry on talking about “climate change adaptation law” as if it was a distinct set of rules and principles. This section shows that currently, this field of law neither exists in international law, nor in domestic law.

#### A. *The Dearth of International Norms on Climate Change Adaptation*

Jonathan Verschuuren suggests that climate change adaptation law “originates at the international level”<sup>94</sup> and that the UNFCCC imposes an “impressive list of adaptation duties.”<sup>95</sup> These duties may exist, but, under closer scrutiny, the list is hardly impressive. The main commitment on adaptation arises from UNFCCC Article 4(1)(b): to “[f]ormulate, implement, publish and regularly update national . . . programmes containing . . . measures to facilitate adequate adaptation to climate change.”<sup>96</sup> It is difficult to imagine any realistic hypothesis where a state would not already have at least one program containing some measures that facilitate climate change adaptation in one way or another, for instance by regulating land use in coastal areas, managing freshwater resources, reducing risks related to natural disasters, pursuing poverty eradication, or developing public health infrastructure. It is even more difficult to imagine a hypothesis in which this state would not already be in breach of various international legal

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<sup>90</sup> *Id.* at 1013.

<sup>91</sup> *Id.*

<sup>92</sup> See, e.g., Arnold, *supra* note 78; RESEARCH HANDBOOK ON CLIMATE CHANGE ADAPTATION LAW, *supra* note 20.

<sup>93</sup> Jonathan Verschuuren, *Introduction*, in RESEARCH HANDBOOK ON CLIMATE CHANGE ADAPTATION LAW, *supra* note 20, at 1, 3.

<sup>94</sup> Jonathan Verschuuren, *Climate Change Adaptation Under the United Nations Framework Convention on Climate Change and Related Documents*, in RESEARCH HANDBOOK ON CLIMATE CHANGE ADAPTATION LAW, *supra* note 20, at 16.

<sup>95</sup> *Id.* at 18.

<sup>96</sup> UNFCCC, *supra* note 16, art. 4(1)(b).

obligations, such as obligations to take appropriate measures to protect the human rights of individuals within its jurisdiction.<sup>97</sup> In other words, it is unclear what Article 4(1)(b) requires states to do, and even more difficult to determine how these requirements do anything other than reaffirm pre-existing obligations.

Article 4(1)(e) requires parties to “[c]ooperate in preparing for adaptation to the impacts of climate change,” including by developing and elaborating “appropriate and integrated plans for coastal zone management, water resources and agriculture, and for the protection and rehabilitation of areas, particularly in Africa, affected by drought and desertification, as well as floods.”<sup>98</sup> This list is not prescriptive—landlocked countries are obviously not required to adopt plans for coastal zone management—but merely illustrative of the types of measures that states may consider implementing under Article 4(1)(b). Under Article 4(1)(f), parties must further “[t]ake climate change considerations into account, to the extent feasible, in their relevant social, economic and environmental policies and actions,”<sup>99</sup> a provision that applies both to climate change mitigation and adaptation. This obligation is purely procedural (“take . . . into consideration”), and it is so heavily qualified (“to the extent feasible,” “in their relevant . . . actions”) that it may be entirely ineffective.

Article 4(4) further requires the developed country parties listed in Annex II to “assist the developing country Parties that are particularly

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<sup>97</sup> See, e.g., International Covenant on Civil and Political Rights, art. 2(1), Dec. 16, 1966, 999 U.N.T.S. 171; International Covenant on Economic, Social and Cultural Rights, art. 2(1), Dec. 16, 1966, 993 U.N.T.S. 3; Convention on the Rights of the Child, art. 2(1), Nov. 20, 1989, 1577 U.N.T.S. 3. See also Draft Articles on the Protection of Persons in the Event of Disasters, 2(2) YEARBOOK OF THE INTERNATIONAL LAW COMMISSION 17 (2016); Third U.N. World Conference on Disaster Risk Reduction, *Sendai Framework for Disaster Risk Reduction 2015-2030*, U.N. Doc. A/CONF.224/CRP.1 (Mar. 18, 2015). See generally, on States’ positive obligations on the protection of human rights, Human Rights Committee, *General Comment No. 31: The Nature of the General Obligation Imposed on States Parties to the Covenant* ¶ 8, U.N. Doc. CCPR/C/21/Rev.1/Add.13 (May 26, 2004) (explaining that “failing to take appropriate measures” as required by the International Covenant on Civil and Political Rights violates the rights guaranteed therein); *Stoicescu v. Romania*, App. No. 9718/03, [2011] Eur. Ct. H.R. 1193, ¶ 59 (July 26, 2011) (“[T]he Court accepts that the measures and actions to be adopted and taken are not an obligation of result, but an obligation of means.”); *Velásquez-Rodríguez v. Honduras*, Merits, Judgment, Inter-Am. Ct. H.R. (ser. C) No. 4, ¶ 172 (July 29, 1988) (noting that states may have responsibility for lack of due diligence to prevent human rights violations); WALTER KÄLIN & JÖRG KÜNZLI, *THE LAW OF INTERNATIONAL HUMAN RIGHTS PROTECTION* 87–105 (2d ed. 2019) (explaining that human rights guarantees impose both negative and positive obligations upon states); Knox, *supra* note 7, ¶¶ 47–61 (recognizing that, while certain human rights obligations bind all states, some obligations vary according to the different capabilities and conditions of a given state).

<sup>98</sup> UNFCCC, *supra* note 16, art. 4(1)(e).

<sup>99</sup> *Id.* art. 4(1)(f).



vulnerable to the adverse effects of climate change in meeting costs of adaptation to those adverse effects.”<sup>100</sup> However, this provision neither requires Annex II parties to cover *all* the costs of adaptation,<sup>101</sup> nor creates any obligation for any Annex II party to pay any specific amount.<sup>102</sup> Under Article 4(8), all parties agreed to “give full consideration to what actions are necessary under the Convention, including actions related to funding, insurance and the transfer of technology, to meet the specific needs and concerns of developing country Parties arising from the adverse effects of climate change.”<sup>103</sup> Such needs and concerns refer in particular to those of “[s]mall island countries,” as well as “[c]ountries with low-lying coastal areas,” “with arid and semi-arid areas, forested areas and areas liable to forest decay,” “with areas prone to natural disasters” or to “drought and desertification,” and “with areas with fragile ecosystems, including mountainous ecosystems,” as well as “[l]and-locked and transit countries” and “[c]ountries with areas of high urban atmospheric pollution.”<sup>104</sup> It is far from clear what the Convention’s “full consideration” requires states to do. On the other hand, the list of grounds justifying special consideration is so long as to include virtually every developing state.<sup>105</sup>

The Kyoto Protocol did not make up for the lack of obligations on climate change adaptation in the UNFCCC. After all, the Protocol was

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<sup>100</sup> *Id.* art. 4(4).

<sup>101</sup> Daniel Bodansky, *The United Nations Framework Convention on Climate Change: A Commentary*, 18 *YALE J. INT’L L.* 451, 528 (1993).

<sup>102</sup> On the existence of financial obligations in climate governance in general (and in particular on climate change mitigation), see Yulia Yamineva, *A Legal Perspective on Climate Finance Debates: How Constructive Is the Current Norm Ambiguity?*, in *DEBATING CLIMATE LAW* 365–78 (Benoit Mayer & Alexander Zahar eds., 2021); ALEXANDER ZAHAR, *CLIMATE CHANGE FINANCE AND INTERNATIONAL LAW* 71–74 (2017); Alexander Zahar, *The Paris Agreement and the Gradual Development of a Law on Climate Finance*, 6 *CLIMATE L.* 75, 76–77 (2016).

<sup>103</sup> UNFCCC, *supra* note 16, art. 4(8).

<sup>104</sup> *Id.*

<sup>105</sup> Thus, among the 154 developing country parties to the UNFCCC, 40 are generally considered as small island developing states and 32 are landlocked countries, while many others have an arid- or semi-arid climate, suffer from desertification, flood, cyclones, or urban air pollution. See *Small Island Developing States*, U.N. SUSTAINABLE DEV., <https://sustainabledevelopment.un.org/topics/sids/list> (last visited Jan. 22, 2021); *List of Landlocked Developing Countries*, UNCTAD, <https://unctad.org/topic/landlocked-developing-countries/list-of-LLDCs> (last visited Jan. 22, 2021). Once all countries with these issues were removed from the list, based on information from the CIA World Factbook, only six countries remained (Democratic People’s Republic of Korea, El Salvador, Gabon, Guatemala, Liberia and Panama). These countries could however require “full consideration” under Article 4(8) on other reasons, for instance because they have low-lying coastal areas, areas liable to forest decay, or areas with fragile ecosystems. See generally CIA, *The World Factbook*, <https://www.cia.gov/the-world-factbook/> (last visited Jan. 22, 2021).

negotiated<sup>106</sup> and adopted<sup>107</sup> based on a clear understanding that it would not be introducing any new commitments for developing country parties (i.e., parties not included in Annex I). The Protocol's objective was to strengthen the commitments of developed country parties on the mitigation of climate change by defining quantified emission limitation and reduction commitments.<sup>108</sup> Beside establishing a financial channel to support adaptation in developing countries,<sup>109</sup> the Protocol's contribution to climate change adaptation was limited to the reaffirmation of the general commitments the parties had made under the UNFCCC.<sup>110</sup> The adaptation programs and projects funded by the Kyoto Protocol's Adaptation Fund are to follow "[a] country-driven approach" to adaptation.<sup>111</sup>

Sharing Verschuuren's optimism, scholars have hailed Article 7 of the Paris Agreement as "a significant step forward"<sup>112</sup> and the foundation of "a new framework or regime"<sup>113</sup> on climate change adaptation. Here again, however, this vindication of an international law on climate change adaptation is not supported by a dispassionate reading of the treaty. Only two provisions of Article 7 (paragraphs 9 and 11) are phrased as obligations (i.e., with the word "shall" applied to legal persons).<sup>114</sup> Like the relevant provisions of the UNFCCC, these two provisions are purely procedural, vague, and heavily qualified. Moreover, they are largely duplicative of the commitments defined by

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<sup>106</sup> UNFCCC, Dec. 1/CP.1, The Berlin Mandate, U.N. Doc. FCCC/CP/1995/7/Add.1, ¶ 2(b) (June 6, 1995).

<sup>107</sup> Kyoto Protocol, *supra* note 19, art. 10.

<sup>108</sup> See The Berlin Mandate, *supra* note 106, ¶ 2(a); Kyoto Protocol, *supra* note 19, pmb. ¶ 6, art. 3(1).

<sup>109</sup> See Kyoto Protocol, *supra* note 19, art. 12(8); see also Kyoto Protocol Dec. 28/CMP.1, U.N. Doc. FCCC/KP/CMP/2005/8/Add.4, ¶ 1 (Mar. 30, 2006).

<sup>110</sup> Kyoto Protocol, *supra* note 19, art. 10.

<sup>111</sup> Kyoto Protocol Decision 28/CMP.1, *supra* note 109, ¶ 3(a).

<sup>112</sup> Alexandra Lesnikowski et al., *What Does the Paris Agreement Mean for Adaptation?*, 17 CLIMATE POL'Y 825, 825 (2017).

<sup>113</sup> Irene Suárez Pérez & Angela Churie Kallhauge, *Adaptation (Article 7)*, in THE PARIS AGREEMENT ON CLIMATE CHANGE: ANALYSIS AND COMMENTARY 196, 221 (Daniel Klein et al. eds., 2017).

<sup>114</sup> Comp. Lavanya Rajamani, *The 2015 Paris Agreement: Interplay Between Hard, Soft and Non-Obligations*, 28 J. ENV'T L. 337, 344–51 (2016) suggesting that Article 7(13) creates a "hard" obligation while Articles 7(7) and 7(10) create "soft" obligations. Yet, Article 7(13) uses the word "shall," but in the passive form, without indicating who would bear the putative obligation ("support shall be provided"). Article 7(7) and (10) use the word "should," which does not indicate a legal obligation. (Rajamani recognizes that what she calls "soft obligations" are in fact merely "provisions that recommend" actions, hence not really obligations.) The absence of an obligation under Article 7(10) was confirmed by the Meeting of the Parties, which "[i]nvites Parties that choose to submit an adaptation communication to do so in time to inform each global stocktake." See Paris Agreement Dec. 9/CMA.1, U.N. Doc. FCCC/PA/CMA/2019/6/Add.1, ¶ 6 (Mar. 19, 2019).

the UNFCCC. The first binding provision, in paragraph 9, requires parties, “as appropriate,” to “engage in adaptation planning processes and the implementation of actions, including the development or enhancement of relevant plans, policies and/or contributions.”<sup>115</sup> The second binding provision, in paragraph 11, requires parties, if they submit an adaptation communication (which they are not obliged to do),<sup>116</sup> and “as appropriate,” to submit and update this communication “periodically, as a component of or in conjunction with other communications or documents.”<sup>117</sup> A later decision listing what “Parties that choose to submit an adaptation communication”<sup>118</sup> could include in the said communication further highlights that a communication “[s]hall not pose any additional burden on developing country Parties, is not a basis for comparison between Parties and is not subject to review.”<sup>119</sup>

The Paris Agreement proclaims a “global goal on adaptation,” but this goal is defined in terms that essentially reiterate the definition of adaptation—parties have a goal of “enhancing adaptive capacity, strengthening resilience and reducing vulnerability to climate change.”<sup>120</sup> Overall, these objectives do not translate into any specific legal norms; as a saying widely attributed to Antoine de Saint-Exupéry suggests, “a goal without a plan is just a wish.”

Further, the Paris Agreement does not create any effective obligation on its parties to fund adaptation in developing states. Parties do “recognize the importance of support for . . . adaptation efforts”<sup>121</sup> and even note that “enhanced international support shall be provided to developing country Parties,”<sup>122</sup> but they do not define any obligation on any state to provide such support.<sup>123</sup> Thus, Daniel Bodansky points out that “[m]ost of the provisions on adaptation . . . are expressed, not as legal obligations, but rather as recommendations, expectations or understandings.”<sup>124</sup> For the most part, Article 7 does little more than take note of states’ actions on climate change adaptation,<sup>125</sup> enabling

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<sup>115</sup> Paris Agreement, *supra* note 17, art. 7(9).

<sup>116</sup> *See id.* art. 7(10) (“should”).

<sup>117</sup> *Id.* art. 7(11).

<sup>118</sup> Dec. 9/CMA.1, *supra* note 114, ¶ 6.

<sup>119</sup> *Id.* ¶ 2(b).

<sup>120</sup> Paris Agreement, *supra* note 17, art. 7(1).

<sup>121</sup> *Id.* art. 7(6).

<sup>122</sup> *Id.* art. 7(13).

<sup>123</sup> *See Zahar, The Paris Agreement, supra* note 102, at 76–77. *See generally* Yamineva, *supra* note 102.

<sup>124</sup> Daniel Bodansky, *The Legal Character of the Paris Agreement*, 25 REV. EUR. COMP. & INT’L ENV’T L. 142, 147 (2016). *See also* Hall & Persson, *supra* note 39, 552–53; Rajamani, *supra* note 114, at 344–51.

<sup>125</sup> Paris Agreement, *supra* note 17, art. 7(2)-(4), (6), (14).

parties to submit adaptation communications to be made publicly available through a registry maintained by the Convention's secretariat.<sup>126</sup>

*B. The Dearth of Domestic Law on Climate Change Adaptation*

Given the paucity of international norms on adaptation on the international plane, one could think that substantive rules and principles on climate change adaptation are to be found, instead, in domestic law. When adaptation is viewed not as a matter of compensation (by responsible states) but rather as a matter of protection (by territorially competent states), it is a matter that falls naturally within the realm of domestic law rather than international law. The concept of subsidiarity suggests that the value judgments inherent to any adaptation strategy should be made as locally as possible—at the national (or subnational) level rather than international. In this sense, the Paris Agreement notes that adaptation action “should follow a country-driven . . . approach.”<sup>127</sup> Likewise, Jacqueline Peel points out that adaptation is “naturally suited to consideration at a local level” since “the benefits of adaptation measures tend to be quite localised.”<sup>128</sup> Banda asserts that “adaptation is still largely treated as a *local* matter.”<sup>129</sup>

However, there is little evidence of lawmaking at the domestic level. In sharp contrast to the proliferation of laws on climate change mitigation,<sup>130</sup> states have virtually no laws dedicated specifically to climate change adaptation. By contrast to its advanced legislation on climate change mitigation,<sup>131</sup> for instance, the EU has not adopted any binding document on climate change adaptation—much to the regret of some observers.<sup>132</sup> A database of “Climate Change Laws of the World,” developed by the Grantham Research Institute at the London School of Economics, lists 2,315 laws and policies on climate change. Among them are 197 documents that the curators considered to fall—exclusively or not—within the framework of adaptation.<sup>133</sup> These results include multiple policies dedicated to climate change adaptation, such

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<sup>126</sup> *Id.* art. 7(10)–(12).

<sup>127</sup> *Id.* art. 7(5).

<sup>128</sup> Jacqueline Peel, *Climate Change Law: The Emergence of a New Legal Discipline*, 32 MELB. UNIV. L. REV. 922, 951 (2008).

<sup>129</sup> Banda, *supra* note 20, at 1031 (emphasis in original).

<sup>130</sup> See *supra* notes 11–12.

<sup>131</sup> See, e.g., Directive 2003/87, *supra* note 11; Regulation 2019/1242, *supra* note 12; Regulation 2019/631, *supra* note 12.

<sup>132</sup> See, e.g., Verschuuren, *supra* note 94, at 29–30.

<sup>133</sup> See Grantham Rsch. Inst. on Climate Change and the Env't, Climate Change Laws of the World (database), available at <https://climate-laws.org/> (last visited July 31, 2021).

as planning documents, but few statutes. The statutes they do include are not generally dedicated to climate change adaptation, and all but one fall within one of the two following groups.

First, there are statutes on climate action generally, which include some provisions on adaptation as essentially an afterthought in a document focusing mostly on climate change mitigation. These provisions are vague and, when they create any obligations at all, tend to only include purely procedural obligations. For instance, the UK's Climate Change Act contains a few procedural provisions on adaptation, essentially setting up a mechanism to assess climate-related risks and adopt policy objectives<sup>134</sup> in a statute otherwise focused on climate change mitigation.<sup>135</sup> Similarly, Kenya's Climate Change Act mentions adaptation among the areas in which the government must define policy objectives and in which actions can be financed through a domestic Climate Change Fund.<sup>136</sup>

Second, the database lists statutes that focus on areas of governance affected by climate change and include some provisions that require consideration for climate change adaptation in other areas of governance. For instance, Vietnam's Law on Natural Disaster Prevention and Control requires climate change to be taken into account when devising national and local strategies on disaster risk reduction.<sup>137</sup> In contrast, Mozambique's framework law on disaster management merely points out the importance of including consideration for climate change in disaster preparedness.<sup>138</sup> These obligations do not create a legal field of climate change adaptation law, but simply ensure that climate change is duly taken into account as a policy objective in relevant pre-existing procedures.

The database's only instance of a law specifically dedicated to climate change adaptation is Japan's Climate Change Adaptation Act of

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<sup>134</sup> Climate Change Act 2008, c. 27 §§ 56–70 (UK).

<sup>135</sup> The Climate Change Act establishes in particular a mitigation target (*id.* § 1) and carbon budgets (*id.* § 4), sets up a committee in charge of advising on mitigation action (*id.* §§ 32–38), and implements a cap-and-trade mechanism (*id.* §§ 44–45). It also establishes waste-reduction schemes (*id.* § 71) and renewable fuel requirements (*id.* § 78) and updates a carbon emission reduction target applicable to power utilities (*id.* § 79).

<sup>136</sup> Climate Change Act (2016) Cap. 11 §§ 14(1)(a), 25(8)(c) (Kenya). *But see* Clarice Wambua, *The Kenya Climate Change Act 2016: Emerging Lessons from a Pioneer Law*, 13 CARBON & CLIMATE L. REV. 257, 261 (2019) (suggesting that “[c]ompared to other framework laws on climate change, [Kenya’s Climate Change] Act is relatively strong on adaptation”).

<sup>137</sup> Law on Natural Disaster Prevention and Control (2013) arts. 4(6), 14(3)(d), 15(4)(b), 15(5)(b) and 15(6)(b), No. 33/2013/QH13 (Viet.).

<sup>138</sup> Law 15/2014 Establishing the Framework for Disaster Management, Including Prevention and Mitigation (2014) art. 11, 50:I *Boletim da República* 1291 (Mozam.).

2018.<sup>139</sup> This statute highlights the moral responsibility of the national and local governments, companies, and the public, to contribute to the adaptation to climate change.<sup>140</sup> In addition, Japan's Adaptation Act defines the role of various public bodies in preparing adaptation strategies in consultation with companies and the public on the basis of scientific observation.<sup>141</sup> Thus, Japan's Adaptation Act incorporates some procedural components of the state's national adaptation plan into law.<sup>142</sup> However, it does not create any substantive rights and obligations for corporations or citizens in the same way that laws on climate change mitigation do. It appears unlikely that any provision of this statute could be enforced by a court. It is, in any case, an isolated exception.

The paucity of dedicated domestic legal instruments does not mean that states are not implementing action on climate change adaptation. States have been reporting on their strategy for climate change adaptation, especially when this has allowed them to apply for international funding through programs like the National Adaptation Programmes of Action funded by the Kyoto Protocol's Adaptation Fund.<sup>143</sup> In addition, more than four out of five intended nationally determined contributions included an adaptation component.<sup>144</sup> Thus, the trend is not limited to developing countries eligible for international financial assistance. Eric Massey and his colleagues revealed a rapid diffusion of policy objectives on climate change adaptation, especially in European countries.<sup>145</sup>

States are adopting and implementing strategies on climate change adaptation not as discrete substantive programs, but rather by mainstreaming adaptation in existing laws and policies.<sup>146</sup> McDonald has showed that statutory reforms implemented in various Australian states and territories in preparation for sea level rise rely on "the

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<sup>139</sup> Climate Change Adaptation Act 気候変動適応法 2018, <https://climate-laws.org/geographies/japan/laws/climate-change-adaptation-act> (Japanese version), <http://www.japaneselawtranslation.go.jp/law/detail/?id=3212&vm=04&re=01> (official English translation).

<sup>140</sup> *Id.* arts. 3–6.

<sup>141</sup> *Id.* arts. 7–15.

<sup>142</sup> Cabinet Dec. (Japan), *National Plan for Adaptation to the Impacts of Climate Change* (Nov. 27, 2015), <https://www.env.go.jp/en/focus/docs/files/20151127-101.pdf>.

<sup>143</sup> UNFCCC Dec. 28/CP.7, U.N. Doc. FCCC/CP/2001/13/Add.4 (Jan. 21, 2002).

<sup>144</sup> See Rep. of the UNFCCC Secretariat, *supra* note 18, ¶ 252.

<sup>145</sup> Eric Massey, Robbert Biesbroek, Dave Huitema & Andy Jordan, *Climate Policy Innovation: The Adoption and Diffusion of Adaptation Policies Across Europe*, 29 GLOB. ENV'T CHANGE 434 (2014).

<sup>146</sup> See generally Xiangbai He, *Legal and Policy Pathways of Climate Change Adaptation: Comparative Analysis of the Adaptation Practices in the United States, Australia and China*, 7 TRANSNAT'L ENV'T L. 347, 347 (2018).

interplay of land use planning, coastal management, climate change, emergency management, and, in some cases, conservation laws.”<sup>147</sup> She concludes that “all of the legislative responses to projected sea level rise involve refinements to existing frameworks rather than entirely new statutory schemes.”<sup>148</sup>

#### IV. THE LACK OF JUSTIFICATION FOR A SUBSTANTIVE LAW ON ADAPTATION

The previous section shows that states have not adopted any distinct set of substantive rules and principles dedicated to promoting climate change adaptation. This section turns to a more controversial question: whether states *ought to* adopt substantive rules and principles on climate change adaptation, or at least on certain aspects of it, such as climate migration or climate disasters.

The following subsections identify and refute the three main arguments that could justify the adoption of a specific set of substantive rules and principles on climate change adaptation. These arguments present climate change adaptation law as, respectively, the response to a collective action problem, the management of phenomena attributable to climate change, and a way to provide reparations to the states injured by the wrongful conduct of other states. The first subsection shows that the justification for international cooperation on climate change mitigation—the existence of a collective action problem—does not apply to climate change adaptation. The second subsection suggests that attribution is likely impossible, and at any rate irrelevant, in determining how states ought to address adverse events brought on by climate change. Lastly, the third subsection concedes that reparations may justify specific legal rules and principles, but not the sort of rules and principles that the concept of climate change adaptation would entail.

##### *A. Adaptation Law as the Response to a Collective Action Problem?*

The parallel between climate change mitigation and adaptation is sometimes thought to suggest that both should be governed by international law. This parallel was suggested early on in international negotiations, for instance when the U.N. General Assembly suggested that the negotiations which would lead to the adoption of the UNFCCC

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<sup>147</sup> McDonald, *Creating Legislative Frameworks*, *supra* note 22, at 129.

<sup>148</sup> *Id.* See also Jan McDonald, *A Short History of Climate Adaptation Law in Australia*, 4 CLIMATE L. 150, 150–54 (2014) (pointing out that “[t]here are currently no laws in Australia whose sole or primary purpose is climate change adaptation,” and that instead the “focus of adaptation law in Australia to date has almost exclusively been land use and spatial planning”).

should seek to define “appropriate commitments for action to combat climate change and its adverse effects.”<sup>149</sup> This parallel was never systematically questioned. In 2015, the General Assembly asserted again that “[t]he global nature of climate change calls for the widest possible international cooperation aimed at accelerating the reduction of global [GHG] emissions and addressing adaptation to the adverse impacts of climate change.”<sup>150</sup> However, the analogy between mitigation and adaptation action is weak and misleading. Both objectives relate to a global phenomenon, but not in the same way, and adaptation does not share the characteristics of mitigation that justify international cooperation in that regard.

Climate change mitigation requires international cooperation because it has all the hallmarks of a collective action problem. Climate change results from global GHG emissions whose sources are scattered among states. It is *collectively* rational for states to invest in substantial efforts to mitigate climate change in order to avoid its worst consequences, but it is also *individually* rational for each state to seek to avoid the costs of implementing mitigation action—each state, pursuing its own interest, would seek to free ride on the efforts implemented by others, resulting in a worse situation for every state.<sup>151</sup> International law could play an essential role in dissuading free riding, that is to say, in ensuring that each state contributes its “fair share” to global mitigation. Climate treaties have tried to perform this task by defining commitments<sup>152</sup> and establishing some sanctions for noncompliance.<sup>153</sup>

It could be said that climate change adaptation is also “global” in nature, but this is true only in a narrower sense, namely in the sense that every state faces comparable issues—every state needs to adapt to climate change. That “global nature” of climate change adaptation, by

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<sup>149</sup> G.A. Res. 45/212, Protection of Global Climate for Present and Future Generations, pmb. ¶ 2 (Dec. 21, 1990).

<sup>150</sup> G.A. Res. 70/1, *supra* note 15, ¶ 31.

<sup>151</sup> STEPHEN M. GARDINER, A PERFECT MORAL STORM: THE ETHICAL TRAGEDY OF CLIMATE CHANGE 26 (2011); ERIC A. POSNER & DAVID WEISBACH, CLIMATE CHANGE JUSTICE 170 (2010).

<sup>152</sup> See UNFCCC, *supra* note 16, art. 4(1)(b), 4(2)(a)–(b); Kyoto Protocol, *supra* note 19, art. 3; Paris Agreement, *supra* note 17, art. 4(2). On the mitigation obligations arising under the Paris Agreement, see Benoit Mayer, *Article 4: Mitigation*, in THE PARIS AGREEMENT ON CLIMATE CHANGE: A COMMENTARY 109 (Geert van Calster & Leonie Reins eds., 2021).

<sup>153</sup> See UNFCCC, *supra* note 16, art. 13 (but note that no decision of implementation has been adopted); Kyoto Protocol, *supra* note 19, art. 3, art. 18; Paris Agreement, *supra* note 17, art. 15. See generally ALEXANDER ZAHAR, INTERNATIONAL CLIMATE CHANGE LAW AND STATE COMPLIANCE (2014); Alexander Zahar, *A Bottom-Up Compliance Mechanism for the Paris Agreement*, 1 CHINESE J. ENV'T L. 69 (2017); Gu Zihua, Christina Voigt & Jacob Werksman, *Facilitating Implementation and Promoting Compliance with the Paris Agreement under Article 15: Conceptual Challenges and Pragmatic Choices*, 9 CLIMATE L. 65 (2019).



itself, does not justify the adoption of international legal norms. By analogy, every state faces comparable issues relating to the maintenance of roads; surely, the “global nature” of road maintenance does not require the adoption of international norms and principles determining how states ought to maintain roads. At most, this narrow “global nature” of road maintenance or adaptation could suggest that it would be useful for states to exchange knowledge and technologies, but no law is required for this to happen. Rules could be adopted on the international plane to require states to adopt and communicate national road-maintenance strategies, but the usefulness of these rules would be questionable, as they would only require states to do what is already, clearly, in their own best interest. Likewise, whereas no state can mitigate climate change effectively on its own, a state can successfully adapt to its impacts without cooperating with other states—and it is in its own best interest to do so. In other words, adaptation is not “an international public good requiring international cooperation”<sup>154</sup>—at least not in the same way as climate change mitigation. Because each state draws the benefits of its own adaptation action, adaptation does not present the sort of collective action problems presented by mitigation.

There may naturally be some instances where cooperation is needed to address *particular* impacts of climate change. Take the example of a transboundary river whose flow is affected by an accelerated melting of glaciers, an increased rate of evapotranspiration in the catchment basin, or changes in precipitation patterns. If (or when) less water flows in the river, the downstream countries may be affected by a reduced flow of water if the upstream countries do not restrict their use. When more water flows, cooperation may also be helpful in reducing the risk of flood, for instance by establishing early-warning systems or optimizing water storage at artificial water reservoirs along the course of the river. This situation calls for cooperation among the watercourse states under a river-specific legal regime<sup>155</sup> which may reflect rules defined at a global level in water law.<sup>156</sup> This water law regime and its river-specific

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<sup>154</sup> Banda, *supra* note 20, at 1027.

<sup>155</sup> See, e.g., Treaty for Amazonian Cooperation, Jul. 3, 1978, 1202 U.N.T.S. 51; Convention on Cooperation for the Protection and Sustainable Use of the Danube River, Jun. 29, 1994, available at <http://www.icpdr.org/main/icpdr/danube-river-protection-convention>; Convention on the Protection of the Rhine, Apr. 12, 1999, 1404 U.N.T.S. 59; Agreement on the Nile River Basin Cooperative Framework, May 14, 2010; Agreement on the Cooperation for the Sustainable Development of the Mekong River Basin, Apr. 5, 1995, 34 I.L.M. 864.

<sup>156</sup> See generally Convention on the Law of the Non-Navigational Uses of International Watercourses, May 21, 1997, 36 I.L.M. 700; United Nations Convention on the Protection and Use of Transboundary Watercourses and International Lakes, Mar. 17, 1992, 31 I.L.M. 1312; STEPHEN C. McCAFFREY, THE LAW OF INTERNATIONAL WATERCOURSES (3d ed. 2019).

applications do not need to approach an impact of climate change differently than any other impacts on the course of the river. Referring back to the transboundary river example, the risk of flood in the basin of the river needs to be addressed through international cooperation among the watercourse states whether the risk always existed or is exacerbated as a result of natural or man-made climate variability.

*B. Adaptation Law as the Management of Phenomena Attributable to Climate Change?*

Adaptation law is not required as the response to a collective action problem, but it could be justified in other ways. Another conceivable, and in fact highly influential argument, would present a law on climate change adaptation as a way to manage the consequences of phenomena attributable to climate change. This argument could be made with regard to climate change adaptation in general, or more specifically to particular aspects of it, calling for substantive rules to be developed to protect “climate migrants”<sup>157</sup> or to reduce risks associated with “climate disasters.”<sup>158</sup> This legal development could be justified based on the understanding that sovereigns have a natural law obligation to offer such standards of treatment to any individual (and possibly any ecological resource) under their jurisdiction.<sup>159</sup> Alternatively, it could be justified on the basis that, in a deeply interconnected world, a state’s failure to protect the most basic rights of its population cannot be without consequences for other states or cannot leave other states entirely indifferent.<sup>160</sup>

Viewing law on climate change adaptation as a management mechanism provides convincing justifications for considering climate change adaptation in various strategic procedures. For example, the predictable impacts of climate change ought to be considered as part of urban planning policies, development strategies, and environmental impact assessment procedures for relevant projects. As noted above, the UNFCCC suggests such an obligation to take climate change adaptation into account in various strategic procedures.<sup>161</sup> This obligation could also be identified by interpretation of states’ treaty or constitutional

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<sup>157</sup> See references *supra* notes 25–27.

<sup>158</sup> See Lyster, *supra* note 28; RESEARCH HANDBOOK ON CLIMATE DISASTER LAW, *supra* note 28.

<sup>159</sup> See generally FRANCIS M. DENG, SADIKIEL KIMARO, TERRENCE LYONS, DONALD ROTHCHILD & I. WILLIAM ZARTMAN, SOVEREIGNTY AS RESPONSIBILITY: CONFLICT MANAGEMENT IN AFRICA (1996).

<sup>160</sup> See, e.g., ROBERT O. KEOHANE & JOSEPH S. NYE JR., POWER AND INTERDEPENDENCE 20–21 (4th ed. 2012).

<sup>161</sup> See UNFCCC, *supra* note 16, art. 4(1)(f).

obligations to protect the enjoyment of human rights for people under their jurisdiction and to manage environmental resources within their territory.<sup>162</sup> The development of a state's public infrastructure (e.g., roads, hospitals and schools), for instance, should take into account any foreseeable demographic changes, including those that may be influenced by the impacts of climate change on migration. These considerations call for mainstreaming climate change adaptation in existing laws and policies. As the previous section has shown, a number of states have adopted statutory provisions that require such considerations to be taken into account in various existing procedures.

Beyond such procedural implications, the argument has also been used to suggest the need for substantive standards: rules and principles that would manage specific impacts of climate change. In this regard, the argument for adaptation law as management of climate impacts is subject to two objections (one conceptual, the other normative) which can be illustrated by the argument on the protection of "climate migrants." The first, conceptual objection is that—as noted above<sup>163</sup>—it is not generally possible to identify phenomena that can be individually attributed to climate change. Climate change may increase the number of migrants altogether, but it is likely impossible to attribute an individual's migration to climate change. If no migrant can be attributed to climate change, it is not possible to apply particular standards to climate-induced migrants.

The second, normative objection is that attributing a phenomenon to climate change is not relevant in determining how this phenomenon ought to be addressed. Even if climate-induced migrants could be identified, it would not make sense to apply specific protection standards to them. Determining whether an individual's migration is induced by climate change is not relevant in assessing whether a migrant has rights—all migrants have rights that must be protected.<sup>164</sup>

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<sup>162</sup> See International Covenant on Civil and Political Rights, *supra* note 97, art. 2(1); International Covenant on Economic, Social and Cultural Rights, *supra* note 97, art. 2(1); Human Rights Committee, *supra* note 97, ¶ 8; Convention on Biological Diversity, art. 6, Jun. 5, 1992, 1760 U.N.T.S. 79; United Nations Convention on the Law of the Sea, arts. 192–237, Dec. 10, 1982, 1833 U.N.T.S. 3.

<sup>163</sup> See text accompanying *supra* note 69.

<sup>164</sup> A counter-objection could be that "climate migrants" deserve protection because they are forced migrants. But the argument should lead to a protection of all forced migrants, rather than to a protection of "climate migrants", which may include both forced and voluntary migrants (as causation does not necessarily imply compulsion). The narrow protection of refugees in domestic or international law certainly does not intend to protect all or even most of forced migrants. On the need to protect forced migrants in general, see ALEXANDER BETTS, SURVIVAL MIGRATION: FAILED GOVERNANCE AND THE CRISIS OF DISPLACEMENT (2013). See also Benoit Mayer,

Nor does the identification of factors that led an individual to migrate determine her protection needs. The threats to a migrant's rights depend on the circumstances in which the migration takes place, for instance its distance and duration, or the individual's social network at the destination,<sup>165</sup> not on what caused the migrant to leave her home at the first place.

This reasoning can be illustrated with an analogy. Consider the hypothetical causal link between economic recession and crime. Studying the effect of economic recession on crime would be useful at a strategic level. When an economic recession occurs, such information may inform a government's decision to hire or deploy police officers, judges, and prison guards. This information may even suggest that, in a time of economic recession, a government should review its criminal law to ensure that it defines punishments that are appropriate to deter crimes even when new factors exacerbated by economic recession (presumably, unemployment and poverty, among other things) are expected to increase the incentive to commit them. On the other hand, a government would not be expected to develop a separate field of "recession-induced criminal law" laying out different crimes and punishments; nor would a reasonable government create a separate police force, court system, or prisons to deal only with "recession-induced crimes." While economic crises may increase crime rates, they do not create a distinct type of crime that could or should be treated differently from other crimes.

In conceptual terms, it is impossible to distinguish "recession-induced crimes" from other crimes. This impossibility is not merely a practical impossibility for lack of knowledge, something that "further research"<sup>166</sup> could address. It is *conceptually* impossible to identify "recession-induced crimes" because the question itself simply does not make sense—it confounds statistical trend and individual determination. Any crime that occurs in a world *with* recession is, in some way, affected by the recession, because the world itself has taken a different "path." Different people were born, their lives unfolded differently, and they committed crimes that they would not have committed (or did not

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"*Environmental Migration*" as Advocacy: *Is It Going to Work?*, 29 REFUGEE: CANADA'S JOURNAL ON REFUGEES 27 (2014).

<sup>165</sup> See generally VULNERABILITY, EXPLOITATION AND MIGRANTS: INSECURE WORK IN A GLOBALISED ECONOMY (Louise Waite et al. eds., 2015); François Crépeau, Report of the Special Rapporteur on the Human Rights of Migrants, U.N. Doc. A/67/299 (Aug. 13, 2012).

<sup>166</sup> For a critical perspective on the frequent assertion that "more research is needed" with regard to climate migration, see Calum T.M. Nicholson, *Climate Change and the Politics of Causal Reasoning: The Case of Climate Change and Migration*, 180 GEOGRAPHICAL J. 151, 153 (2014).

commit crimes they would have committed) against people who would not have existed, or whom they would not have encountered at the same place and at the same time, had recession not happened.<sup>167</sup> In normative terms, at any rate, this distinction is not generally relevant to the existence of a crime or to the responsibility of a defendant. Mitigating or aggravating circumstances may be related to the recession, but this relation need not be ascertained in individual cases based on general rules and principles.

Look at another factor that has been shown to influence crime rates: the weather and, by extension, climatic conditions. Matthew Ranson has shown that “temperature has a strong positive effect on criminal behaviour,” such that climate change may “cause an additional 22,000 murders” in the United States between 2010 and 2099.<sup>168</sup> Here again, this finding may be useful at a strategic level. For instance, it may be useful to recruit more police officers and deploy them in regions whose murder rates are most affected by climate change. However, Ranson surely does not suggest that 22,000 individual murders can be attributed to climate change. Here also it would be *conceptually* impossible to identify the 22,000 “climate-induced murders”—or any individual murder which would not have been committed had the climate system not changed. Moreover, attribution would not be relevant to the way society ought to address these crimes; the statistical impact of a hot day on the number of murders surely does not absolve hot-day murderers of their criminal liability. Inasmuch as heat could constitute a defense or a mitigating circumstance (e.g., perhaps, when water was stolen out of vital necessity), the defendant would at most need to prove that the crime was committed on a hot day, not that the hot day was induced by climate change.

While nobody (to the best of the author’s knowledge) has proposed a different crime for climate-induced murder, a number of proposals have been made for laws addressing other climate-induced phenomena, in particular “climate migration” and “climate disasters.” These concepts face the same conceptual and normative objections as the concept of “climate-induced murders” would.

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<sup>167</sup> See generally EDWARD N. LORENZ, *THE ESSENCE OF CHAOS* (1993).

<sup>168</sup> Matthew Ranson, *Crime, Weather, and Climate Change*, 67 *J. ENV’T ECON. & MGMT.* 274, 274 (2014). See also Heather R. Stevens, Paul J. Beggs, Petra L. Graham & Hsing-Chung Chang, *Hot and Bothered? Associations between Temperature and Crime in Australia*, 63 *INT’L J. OF BIOMETEOROLOGY* 747 (2019); Rongbin Xu, Xiuqin Xiong, Michael J. Abramson, Shanshan Li & Yuming Guo, *Ambient Temperature and Intentional Homicide: A Multi-City Case-Crossover Study in the US*, 143 *ENV’T INT’L* 105992 (2020).

Thus, various law and policy scholars have noted that climate change affects patterns of human migration and, on this basis, they have argued for specific legal rules and principles to protect individual migrants attributed to climate change (whether they are called “climate refugees,” “climate migrants,” or otherwise).<sup>169</sup> Yet, while climate change may result in an increase in the total population of migrants,<sup>170</sup> no person’s migration can individually be attributed to climate change.<sup>171</sup> Overall, these arguments lack normative traction; attribution to climate change, if it was not conceptually impossible, would in any case be irrelevant when assessing the person’s rights or what needs to be done to protect these rights. For example, there would be no reason to prioritize the protection of a population of “climate migrants” over the protection of other migrants.<sup>172</sup> It may be the case that existing law fails at protecting the rights of migrants, but this is not a problem specific to the impacts of climate change, and this problem should be fixed by revising laws on migration, not by adopting different laws on climate change adaptation.<sup>173</sup>

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<sup>169</sup> See, e.g., Biermann & Boas, *supra* note 25; MCADAM, CLIMATE CHANGE, FORCED MIGRATION, AND INTERNATIONAL LAW, *supra* note 27; Lauren Nishimura, “Climate Change Migrants”: Impediments to a Protection Framework and the Need to Incorporate Migration into Climate Change Adaptation Strategies, 27 INT’L J. REFUGEE L. 107, 110–11 (2015).

<sup>170</sup> There is evidence that some impacts of climate change exacerbate migration “pulls” and “push” factors, but also that some impacts of climate change may reduce such factors or hinder migration in various ways, for instance by depriving potential migrants from the financial resources necessary to contemplate a migratory project. As such, it is not as obvious as often assumed that, overall, climate change increases migration flows. Inevitably, the response is in part contingent to individual and collective choices made in response to the impacts of climate change. See generally UK GOV’T OFFICE FOR SCL., FORESIGHT, MIGRATION AND GLOBAL ENVIRONMENTAL CHANGE: FINAL PROJECT REPORT (2011), [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/287717/11-1116-migration-and-global-environmental-change.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/287717/11-1116-migration-and-global-environmental-change.pdf).

<sup>171</sup> See generally Calum T.M. Nicholson, “Climate Mobility” Is Not a Proper Subject of Research and Governance, in DEBATING CLIMATE LAW, *supra* note 102, at 215; FORESIGHT, *supra* note 170; Calum T.M. Nicholson, 26 J. REFUGEE STUD. 311 (2013) (reviewing JANE MCADAM, CLIMATE CHANGE, FORCED MIGRATION, AND INTERNATIONAL LAW); Benoit Mayer, *Constructing Climate Migration as a Global Governance Issue: Essential Flaws in the Contemporary Literature*, 9 MCGILL INT’L J. SUSTAINABLE DEV. L. & POL’Y 87 (2013).

<sup>172</sup> See, e.g., BENOIT MAYER, THE CONCEPT OF CLIMATE MIGRATION: ADVOCACY AND ITS PROSPECTS 53–97 (2016).

<sup>173</sup> See, e.g., BETTS, *supra* note 164, at 16–17. Thus, the Nansen Initiative, which started with a focus on the impacts of climate change on migration, concluded by suggesting protection rules applicable to any disaster-induced displacement notwithstanding its causal relation with climate change. See, e.g., Water Kälén, *The Nansen Initiative: Building Consensus on Displacement in Disaster Contexts*, 49 FORCED MIGRATION REV. 5 (2015); François Gemenne and Pauline Brückner, *From the Guiding Principles on Internal Displacement to the Nansen Initiative: What the Governance of Environmental Migration Can Learn from the Governance of Internal Displacement*, 27 INT’L J. REFUGEE L. 235 (2015).

Arguments about “climate disasters”<sup>174</sup> run into similar issues. To speak meaningfully about a “climate disaster,” one would need not only to attribute an extreme weather event to climate change (which itself is problematic),<sup>175</sup> but also attribute the disaster to this weather event in abstraction from social, economic, political, and other factors influencing vulnerability, exposure, and resilience.<sup>176</sup> But even leaving questions of attribution aside, the usefulness of this concept is not at all clear. There is no doubt that climate change “will greatly accentuate disaster risks, putting even more stress on disaster response systems,”<sup>177</sup> and this should certainly be taken into account, for instance, when a state decides how to allocate resources to disaster preparedness. Yet, there does not seem to be any reason why a “potential legal duty to deal with climate-related disaster risks”<sup>178</sup> would differ from states’ general disaster-risk-management obligations arising from international human rights law.<sup>179</sup> Arguments for the creation of a “climate-disaster law” have neither demonstrated that disasters can be attributed to climate change, nor that they ought to be treated differently from other disasters.

This line of argument applies to countless other suggestions with regard to substantive norms that could be included in a law on climate change adaptation. Knowing climate change impacts a lot of “things” does not prove the existence of “climate-induced things” that *can* and *ought to* be distinguished from other “things.” For example, Phillipa McCormack convincingly argues that biological diversity needs to be protected when it is under stress, and that such stress may be exacerbated by the impacts of climate change.<sup>180</sup> However, the need to protect biological diversity applies equally and indifferently to all stressors, notwithstanding any relation they may have to climate change. Michael Faure makes an interesting case for using compensation as a tool of social protection in the event of a disaster as a form of climate change adaptation,<sup>181</sup> but this argument should be made in relation to any disaster, rather than solely in the context of climate change. The

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<sup>174</sup> See Lyster, *supra* note 28; RESEARCH HANDBOOK ON CLIMATE DISASTER LAW, *supra* note 28.

<sup>175</sup> See *supra* notes 70–71 and accompanying text.

<sup>176</sup> See *supra* notes 53 and 74 and accompanying text.

<sup>177</sup> Daniel Farber, *Climate Change and Disaster Law*, in THE OXFORD HANDBOOK OF INTERNATIONAL CLIMATE CHANGE LAW, *supra* note 11, at 589.

<sup>178</sup> *Id.* at 594.

<sup>179</sup> See generally Draft Articles on the Protection of Persons in the Event of Disasters, *supra* note 97.

<sup>180</sup> See generally Phillipa C. McCormack, *Conservation Introductions for Biodiversity Adaptation under Climate Change*, 7 TRANSNAT’L ENV’T. L. 323 (2018).

<sup>181</sup> Michael Faure, *Climate Change Adaptation and Compensation*, in RESEARCH HANDBOOK ON CLIMATE CHANGE ADAPTATION LAW, *supra* note 20, at 110.

impact of climate change on public health also does not justify the development of a new field of climate-related public health law.<sup>182</sup> Human rights protection and environmental conservation are not wheels that need to be reinvented “in the context of climate change.”

As suggested above, this line of argument extends to the management of transboundary environmental resources, too. For instance, climate change may have an impact on water availability, or on the health of certain ecosystems, but that does not command the development of new legal regimes.<sup>183</sup> The solution, rather, lies in adapting existing regimes on the management of transboundary water resources and ecosystems to include considerations for climate change adaptation. When no treaty regime exists, one may need to be created—not specifically to adapt to climate change, but to address comprehensively the issue (e.g., the management of a watercourse) that climate change is exacerbating.

At times, it is conceivable that climate change may create new phenomena. The best examples would perhaps relate to the impacts of sea level rise, ranging from the disappearance of entire “sinking states” to the modification of baselines used for maritime delimitation.<sup>184</sup> The relevant legal regimes on the recognition of states and on maritime delimitation ought to evolve in reaction to these changes, whether through the adoption of amendments to existing treaty regimes or by way of interpretation. Still, addressing these issues does not require the development of a distinct set of substantive rules focusing on climate change adaptation. These issues need to be addressed by adapting existing laws, not by adopting laws on climate change adaptation.

In other instances, the impacts of climate change may lead to a political awakening about flaws in existing legal rules and principles. For instance, the discourse on “climate migration” tends to highlight the lack of protection for most forced migrants, beyond a narrow and weak refugee regime.<sup>185</sup> Meanwhile, research on “climate disasters” may show certain shortcomings in the law on disaster risk reduction. These

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<sup>182</sup> See CLIMATE CHANGE, PUBLIC HEALTH, AND THE LAW, *supra* note 29.

<sup>183</sup> See Banda, *supra* note 20, at 1056; Raya Marina Stephan, *Climate Change Considerations under International Groundwater Law*, 42 WATER INT’L 757, 764–66 (2017).

<sup>184</sup> The implications of sea level rise for the development of international law are currently under consideration by the International Law Commission. See Int’l L. Comm’n, Report on the Work of Its Seventy-First Session, ¶ 265, U.N. Doc. A/74/10 (2019). See also Ori Sharon, *Tides of Climate Change: Protecting the Natural Wealth Rights of Disappearing States*, 60 HARV. INT’L L.J. 95 (2019); Ori Sharon, *State Extinction Through Climate Change*, in DEBATING CLIMATE LAW, *supra* note 102, at 349.

<sup>185</sup> See Convention Relating to the Status of Refugees, art. 1(A)(2), Jul. 28, 1951, 189 U.N.T.S. 137. See generally JAMES C. HATHAWAY & MICHELLE FOSTER, THE LAW OF REFUGEE STATUS (2d ed. 2014); BETTS, *supra* note 164.



problems, however, do not call for *more* laws, but simply for *better* laws.

### C. Adaptation Law as Reparation?

A last conceivable argument to justify substantive rules and principles on climate change adaptation presents adaptation as, essentially, the remedy for a wrongdoing. It is well known that most GHG emissions relate to activities that take place in (or otherwise benefit) developed countries.<sup>186</sup> On the other hand, developing countries are often more affected by the impacts of climate change because they are often more exposed to extreme weather events (e.g., by being located in tropical regions) and, overall, lack access to the resources needed to decrease vulnerability and increase resilience.<sup>187</sup> A law on climate change adaptation—the argument goes—could help to hold the states that contributed the most to climate change accountable to those most affected by its adverse impacts. Adaptation law, in other words, would seek to convey climate reparations.<sup>188</sup>

On these grounds, developing states originally pushed the concept of adaptation on the agenda of international negotiations in the late 1980s.<sup>189</sup> Article 4(4) of the UNFCCC requires developed-country parties to “assist” developing countries “in meeting costs of adaptation,”<sup>190</sup> thus suggesting that adaptation could be associated with something akin to compensation, even if developed states could not agree to include this word in the Convention.<sup>191</sup> Yet, throughout nearly

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<sup>186</sup> See, e.g., Charles Kolstad et al., *Social, Economic, and Ethical Concepts and Methods*, in CLIMATE CHANGE 2014: MITIGATION OF CLIMATE CHANGE: WORKING GROUP III CONTRIBUTION TO THE FIFTH ASSESSMENT REPORT OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE 207, 215 (2014), available at <https://www.ipcc.ch/report/ar5/wg2/>.

<sup>187</sup> See *id.*; Field et al., *supra* note 14, at 40.

<sup>188</sup> See, e.g., Benoit Mayer, *Climate Change Reparations and the Law and Practice of State Responsibility*, 7 ASIAN J. INT’L L. 185 (2017); Daniel A. Farber, *Basic Compensation for Victims of Climate Change*, 155 U. PA. L. REV. 1605 (2007); Daniel A. Farber, *The Case for Climate Compensation: Justice for Climate Change Victims in a Complex World*, 2008 UTAH L. REV. 377 (2008); W. Neil Adger & Jon Barnett, *Compensation for Climate Change Must Meet Needs*, 436 NATURE 328, 328 (2005); Richard S.J. Toll & Roda Verheyen, *State Responsibility and Compensation for Climate Change Damages—A Legal and Economic Assessment*, 32 ENERGY POL’Y 1109 (2004); CATRIONA MCKINNON, CLIMATE CHANGE AND FUTURE JUSTICE: PRECAUTION, COMPENSATION, AND TRIAGE 74–83 (2012); RODA VERHEYEN, CLIMATE CHANGE DAMAGE AND INTERNATIONAL LAW: PREVENTION DUTIES AND STATE RESPONSIBILITY (2005); MARGARETHA WEWERINKE-SINGH, STATE RESPONSIBILITY, CLIMATE CHANGE AND HUMAN RIGHTS UNDER INTERNATIONAL LAW (2019).

<sup>189</sup> Caracas Declaration of the Ministers of Foreign Affairs of the Group of 77 on the Occasion of the 25th Anniversary of the Group, ¶ II:34, U.N. Doc. A/44/361 (Jun. 30, 1989).

<sup>190</sup> UNFCCC, *supra* note 16, art. 4(4).

<sup>191</sup> See Peter Sands, *The United Nations Framework Convention on Climate Change*, 1 REV. EUR. CMTY. & INT’L ENV’T L. 270, 275 (1992).

three decades of international negotiations on climate change, developed states have constantly avoided any recognition of responsibility, let alone any commitment to pay any sort of “reparation.” The advocates of compensation for developing states could have viewed the recognition of “loss and damage associated with climate change impacts in developing countries”<sup>192</sup> by the Bali Action Plan and subsequent COP decisions establishing a work program on loss and damage<sup>193</sup> and the Warsaw international mechanism for loss and damage<sup>194</sup> as a victory.<sup>195</sup> But, instead of an anchoring point for discussions on reparations, loss and damage was soon treated with the same ambivalence as adaptation.<sup>196</sup> Though the Paris Agreement contains an article that “recognize[s] the importance of averting, minimizing and addressing loss and damage,”<sup>197</sup> the COP noted that this article “does not involve or provide a basis for any liability or compensation.”<sup>198</sup>

The objective of paying reparations, however, does not justify the adoption of substantive rules and principles determining how states are to adapt to climate change—how they must address “climate migration” or “climate disasters.”<sup>199</sup> Instead of making up for the damage suffered by developing states, most of the substantive norms on climate change adaptation impose new obligations on developing states. Even non-binding guidelines would likely erode the sovereignty of developing states; instead of making their development policy based on their own priorities, developing states would be required, or at least expected, to

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<sup>192</sup> Bali Action Plan, *supra* note 40, ¶ 1(c)(iii).

<sup>193</sup> Cancun Agreements, *supra* note 40, ¶ 26. *See also* UNFCCC Dec. 7/CP.17, U.N. Doc. FCCC/CP/2011/9/Add.2 (Mar. 15, 2012); UNFCCC Dec. 3/CP.18, U.N. Doc. FCCC/CP/2012/8/Add.1 (Feb. 28, 2013).

<sup>194</sup> UNFCCC Dec. 2/CP.19, U.N. Doc. FCCC/CP/2013/10/Add.1, (Jan. 31, 2014).

<sup>195</sup> *See generally* Saleemul Huq, Erin Roberts & Adrian Fenton, *Loss and Damage*, 3 NATURE CLIMATE CHANGE 947 (2013); Sam Adelman, *Climate Justice, Loss and Damage and Compensation for Small Island Developing States*, 7 J. HUM. RTS. & ENV'T 32 (2016); Jonathan Gewirtzman et al., *Financing Loss and Damage: Reviewing Options Under the Warsaw International Mechanism*, 18 CLIMATE POL'Y 1076 (2018); Benjamin Dudley Tombs & Ben France-Hudson, *Climate Change Compensation: An Unavoidable Discussion*, 14 POL'Y Q. 50 (2018). *See also* Rachel James et al., *Characterizing Loss and Damage from Climate Change*, 4 NATURE CLIMATE CHANGE 938, 939 (2014).

<sup>196</sup> *See generally* Benoit Mayer, *Whose “Loss and Damage”? Promoting the Agency of Beneficiary States*, 4 CLIMATE L. 267 (2014); Florentina Simlinger & Benoit Mayer, *Legal Responses to Climate Change Induced Loss and Damage*, in LOSS AND DAMAGE FROM CLIMATE CHANGE CONCEPTS, METHODS AND POLICY OPTIONS 179 (Reinhard Mechler et al. eds., 2019).

<sup>197</sup> Paris Agreement, *supra* note 17, art. 8(1).

<sup>198</sup> Adoption of the Paris Agreement, *supra* note 18, ¶ 51.

<sup>199</sup> *See* Benoit Mayer, *Climate Change, Migration and the Law of State Responsibility*, in RESEARCH HANDBOOK ON CLIMATE CHANGE, MIGRATION AND THE LAW, *supra* note 25, at 238.

follow value judgments made by international institutions.<sup>200</sup> Thus, instead of providing reparations, adaptation law would likely result in unjustified limitations to the rights of the states most affected by climate change to sustainable development,<sup>201</sup> and to the right of their peoples to self-determination.<sup>202</sup>

The adoption of international standards on climate change adaptation would inevitably raise questions of power and legitimacy. The geopolitical power of developed states means that international norms on climate change adaptation would often promote the interests of developed states at the expense of the interests of developing states. This trend is most visible in relation to the prominence of the concept of “climate migration” in the academic literature and international negotiations.<sup>203</sup> Do developing countries benefit from this particular focus? Protecting the rights of migrants is obviously an important priority, but it is not the only one. Migration studies show that the most vulnerable individuals in a society affected by a disaster are typically those least able to migrate, as they lack the resources necessary to put themselves out of harm’s way.<sup>204</sup> The emphasis on the management of migration in international negotiations could induce states with limited resources to invest disproportionately in protecting the rights of migrants at the expense of the rights of individuals unable to migrate. It may not be a coincidence that this focus on migration, among all the various impacts of climate change on societies, promotes the political agenda of many developed states by containing migrants in the Global South.<sup>205</sup> Instead of reparations, international rules on climate change adaptation tend to result in political interference in the domestic affairs of developing states, thus making the situation worse for those states least responsible for, but most affected by, the impacts of climate change.

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<sup>200</sup> See U.N. ENV’T PROGRAMME, THE ADAPTATION GAP REPORT, annex ch. 3 at 1 (2018), [www.unenvironment.org/resources/adaptation-gap-report](http://www.unenvironment.org/resources/adaptation-gap-report); Lindsey Jones, *Resilience Isn’t the Same for All: Comparing Subjective and Objective Approaches to Resilience Measurement*, 10 WIREs CLIMATE CHANGE, Jan./Feb. 2019, Article No. e552, at 16; Annett Möhner, *The Evolution of Adaptation Metrics Under the UNFCCC and its Paris Agreement*, in ADAPTATION METRICS: PERSPECTIVES ON MEASURING, AGGREGATING AND COMPARING ADAPTATION RESULTS 15 (Lars Christiansen, Gerardo Martinez & Prakriti Naswa eds., 2018).

<sup>201</sup> See, e.g., UNFCCC, *supra* note 16, art. 3(4).

<sup>202</sup> See, e.g., International Covenant on Civil and Political Rights, *supra* note 97, art. 1(1); International Covenant on Economic, Social and Cultural Rights, *supra* note 97, art. 1(1).

<sup>203</sup> See, e.g., Cancun Agreements, *supra* note 40, ¶ 14(f); Adoption of the Paris Agreement, *supra* note 18, at ¶ 49.

<sup>204</sup> See, e.g., FORESIGHT, *supra* note 170, at 54.

<sup>205</sup> See generally B.S. Chimni, *The Geopolitics of Refugee Studies: A View from the South*, 11 J. REFUGEE STUD. 350 (1998).

## V. CONCLUSION

This article questions the need for a law on climate change adaptation. Too often, the need for a legal field is asserted based merely on the observation that adaptation is recognized as an important policy objective. Not all policy objectives are best addressed through the development of a dedicated legal regime. Effective adaptation action does not necessarily involve the development of a new legal field or the creation of specific categories or dedicated institutions. The impacts of climate change may reveal some shortfalls in existing law, such as in disaster preparedness or the protection of the rights of migrants, but these shortfalls ought to be addressed by improving existing laws rather than by reinventing the wheel. Conversely, questions of responsibility and reparations should be addressed through compensation, not by imposing additional obligations on those states that are the most affected by the impacts of climate change. The law needs to adapt to climate change, but there is no obvious need to adopt laws on climate change adaptation—at least not beyond what Ruhl and Salzman call a “procedural overlay,”<sup>206</sup> which would be aimed at ensuring that climate change adaptation is mainstreamed in various fields of law.

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<sup>206</sup> Ruhl & Salzman, *supra* note 80, at 1020.