

# Climate Change & Armed Conflict:

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Pakistan's Vulnerability  
in the coming Water Wars

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# **CLIMATE CHANGE AND ARMED CONFLICT:**

## **PAKISTAN'S VULNERABILITY IN THE COMING WATER WARS**

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Cover image:

The Glow of the Indus River Basin

NASA Earth Observatory image by Joshua Stevens

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# TABLE OF CONTENTS

<b>1. Executive Summary</b>	5
<b>2. Climate Change: The Effects</b>	7
<b>2.1 Globally</b>	7
2.1.1 <i>Impact on Freshwater Systems</i>	8
2.1.2 <i>Impact on the International Order</i>	8
<b>2.2 Pakistan</b>	9
<b>3. Climate Change: A Driver of Armed Conflict?</b>	11
<b>3.1 As A Direct Link</b>	11
<b>3.2 As A Threat Multiplier</b>	12
<b>3.3 Water Wars</b>	13
<b>4. Can International Law deal with Climate Change-Driven Conflicts?</b>	16
<b>4.1 International Law of Climate Change</b>	16
4.1.1 <i>The UNFCCC, Kyoto Protocol, and Paris Agreement</i>	16
4.1.2 <i>Customary International Environmental Law</i>	17
<b>4.2 International Law on the Use of Force</b>	19
4.2.1 <i>Collective Security Operations</i>	19
4.2.2 <i>Self-Defence/Atmospheric Interventions</i>	20
<b>4.3 International Water Law</b>	21
<b>5. Case Study: Pakistan-India Water Relations</b>	23
<b>5.1 The Indus and Climate Change</b>	23
<b>5.2 Historical Perspective</b>	24
<b>5.3 Indus Waters Treaty (1960)</b>	24
5.3.1 <i>The Kashmir Issue</i>	25
5.3.2 <i>Key Provisions</i>	25
5.3.3 <i>'Differences' and 'Disputes' under the Treaty</i>	27
5.3.3.1 <i>Baglihar Dam</i>	27
5.3.3.2 <i>Kishenganga Hydro-Electric Plant</i>	28
5.3.4 <i>Issues the Parties have with the Treaty</i>	29
5.3.5 <i>Weaknesses of the Treaty</i>	31
<b>5.4 Applying International Law to Pakistan-India Water Relations</b>	31

5.4.1	<i>International Law of Climate Change and Customary International Environmental Law</i>	31
5.4.2	<i>International Law on the Use of Force</i>	32
5.4.3	<i>International Law of State Responsibility</i>	33
5.4.4	<i>International Water Law</i>	34
	<b>5.5 Recourse for Pakistan</b>	34
	<b>6. Conclusion</b>	35

# 1. Executive Summary

No army, with bombs and shellfire, could devastate a land as thoroughly as Pakistan could be devastated by the simple expedient of India's permanently shutting off the sources of water that keep the fields and people of Pakistan alive.<sup>1</sup>

David Lilienthal, 1951

The science on climate change is clear - the world is warming at dangerous levels. Optimists and alarmists alike agree that it poses an existential threat to the planet with potentially catastrophic effects for the future of civilisation. One of the impacts of climate change is expected to be an increase in armed conflict with States fighting over remaining natural resources. While researchers differ on the direct nature of the link between armed conflict and climate change, many agree that it will operate as a threat multiplier; i.e. that the climate changing will 'load the dice' and make future conflicts more likely. Much of the discussion on this effect focuses on conflict breaking out over water as a particularly vital resource with its scarcity being at the root of future insecurity. In addressing this threat, the international legal framework will have to yield key principles, such as sovereignty and territorial integrity, to the reality of climate change. The international order as we know it will also change.

Pakistan is the fifth most vulnerable country in the world to climate change and the third most water stressed. By 2025, it is anticipated that water demand will outstrip supply by 35 percent. It is also in an extremely vulnerable position in relation to this resource as a lower riparian State to India. The rise of Hindutva nationalism in its hydrological neighbour does not bode well. India has, since electing the BJP into power, repeatedly threatened to cut off all water to Pakistan and give it to Jammu and Kashmir instead. In so doing, it is weaponising Pakistan's water needs and driving a wedge between the country and Kashmiris. After the Uri attack in 2016, Indian Prime Minister Modi said that "Blood and Water cannot flow simultaneously." The only legal instrument regulating water-relations between India and Pakistan, however, remains the Indus Waters Treaty of 1960. While the two countries have resolved issues under the agreement through hydrodiplomacy and the treaty's dispute resolution process in the past, there are well-founded fears that India may go beyond rhetoric and resort to unilateral acts violating the water-sharing pact. The risk of India undertaking this sort of hydrohegemony for Pakistan is acute and a source of existential anxiety. Pakistan only has enough water storage to last 30 days if India were to shut off its water. Meanwhile, it has countered Indian rhetoric by stating that it will consider any diversion of water to be an act of war.

This paper will explore and assess all of these issues. It will start with a discussion of the effects of climate change, focusing on its impact on freshwater systems and Pakistan specifically. It will then consider the link between climate change and armed conflict, particularly 'water wars', concluding that it acts as a threat multiplier making conflict more likely. The article goes on to analyse international legal frameworks and key principles applicable on States that may counter the effects of climate-change fuelled

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<sup>1</sup> The Diplomat, *Kashmir: A Water War in the Making?* Baba Umar, June 9, 2016, <https://thediplomat.com/2016/06/kashmir-a-water-war-in-the-making/>

conflicts. Part Five of this paper then looks at Pakistan-India water relations as a case study. It begins with a historical perspective with regards to the adoption of the Indus Waters Treaty, key aspects of the treaty, the dispute resolution process, and its weaknesses. The international legal framework is then applied to Pakistan and India's water relations and possible recourse for Pakistan in the event that India does take unilateral steps in breach of the treaty are analysed. The paper concludes by advocating that Pakistan adopt a forward-looking approach in responding to any possible actions by India. It does this in the hope that we can avoid a water-aggravated war; the lives of the 300 million people in both countries relying on the Indus for sustenance depend on it.

## 2. Climate Change: The Effects

### 2.1 Globally

Climate change is the response of the planet's climate system to altered concentrations of carbon dioxide and other greenhouse gases and aerosols in the atmosphere and changes in the reflectivity of the Earth's surface.<sup>2</sup> It causes global warming which is the increase in global average temperatures and associated changes in climate patterns.<sup>3</sup> The world is experiencing the effects of climate change caused by human activity.<sup>4</sup>

Currently, the earth is around 1°C hotter than pre-industrial levels with higher warming levels in certain regions such as the Arctic.<sup>5</sup> This is causing rising temperatures, affecting the water and food supply, leading to more extreme weather conditions, increasing allergens, and rising sea levels. Moreover, too much carbon in the atmosphere will likely trigger feedback loops and cascade tipping points. These cascades will result in exponential rather than linear temperature increases predicted to cause climate crises.<sup>6</sup>

The most recent Intergovernmental Panel on Climate Change's (IPCC) Assessment Report predicts that climate change will have catastrophic implications for human survival.<sup>7</sup> Average global temperatures are increasing at around 0.2°C per decade.<sup>8</sup> It is predicted that we will reach 4 degrees of warming by 2100 which will render whole regions of Africa and Australia and parts of North and South America uninhabitable by direct heat, desertification and flooding.<sup>9</sup> The UN projects that there will be 200 million climate refugees by 2050.<sup>10</sup> Half of the world's population will live in areas of high water stress by 2030, most of them in the developing world.<sup>11</sup>

In sum, "we are exceeding the speed limit"<sup>12</sup> and while personal and collective responses oscillate between denial and fatalism, a paucity of political will to confront the crisis means we are headed towards catastrophic climate change.

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<sup>2</sup> BBC News, *What is climate change? A really simple guide*, May 5, 2020, available at: <https://www.bbc.com/news/science-environment-24021772>

<sup>3</sup> Ibid

<sup>4</sup> David Wallace-Wells, *The Uninhabitable Earth: Life After Warming*, 2019, Penguin Books

<sup>5</sup> Intergovernmental Panel on Climate Change, Summary for Policymakers in Special Report: Global Warming of 1.5°C, (2018)

<sup>6</sup> Craig Martin, 'Atmospheric Intervention? The Climate Change Crisis and the Jus ad Bellum Regime', (2020) 45(2) Columbia Journal of Environmental Law

<sup>7</sup> See IPCC Report (supra n.5)

<sup>8</sup> Ibid

<sup>9</sup> David Wallace-Wells (supra n.4)

<sup>10</sup> Ibid

<sup>11</sup> Gabriel E Eckstein, 'Water Scarcity, Conflict, and Security in a Climate Change World: Challenges and Opportunities for International Law and Policy' (2009) 27 Wis Int'l LJ 409

<sup>12</sup> John Steinbruner, 'Rising Temps and Emerging Threats: The Intersection of Climate Change and National Security in the 21st Century' (2014) 15 Vt J Envtl L 665

### *2.1.1 Impact on Freshwater Systems*

An early and direct impact of climate change will be felt on freshwater systems due to increased temperatures. A warmer climate will result in the melting of glaciers and snowpack in areas such as the Himalayas which will cause an increase in river flow.<sup>13</sup> Once the glaciers and snowpacks are depleted, however, there will be reduced river flow resulting in water scarcity.<sup>14</sup> Agricultural production is usually critically dependent on the regularity of the hydrological cycle and any changes could impact the ability of farmers to provide food security as crops could become unsustainable.<sup>15</sup> Eckstein notes that “more than one-sixth of the world’s population lives in basins that are critically dependent on glacial and snowmelt water to carry them through the dry season”.<sup>16</sup> The inability to meet food needs will become a critical risk given a burgeoning world population which will reach an expected 9 billion by 2050.<sup>17</sup> The IPCC report estimates that between 1.1 and 3.2 billion people could experience water scarcity by 2080.<sup>18</sup>

The impacts of higher temperatures will not be uniform and while some regions may get wetter others will get dryer with more frequent floods and droughts across the board.<sup>19</sup> The impact of variable and volatile precipitation will be felt on agricultural production, economic development, population growth and power generation.<sup>20</sup> Few countries have prepared for the challenges they will face as a result of this. Fewer have engaged in collective action to manage any fallout from the disastrous impacts of climate change on water resources and this is especially problematic given that almost every state in the world is hydrologically connected to its neighbours.<sup>21</sup>

### *2.1.2 Impact on the International Order*

International law literature has also defined climate change as a possible threat due to its link with armed conflict (which will be explored later) and to the very existence of States.<sup>22</sup> This will be a challenge as the international legal framework has not envisaged situations in which States may become entirely inhabitable or physically lose all of its territory. The key issue is expected to be whether statehood will continue to be a bedrock principle of international law and, if so, what would happen to the nationals of States which no longer exist.<sup>23</sup> Changing boundaries due to sea level rise may also complicate the settlement of disputes between States over maritime boundaries, only 160 of 365 of which are already

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<sup>13</sup> Eckstein (supra n.11)

<sup>14</sup> Ibid

<sup>15</sup> Ibid

<sup>16</sup> Ibid

<sup>17</sup> David Wallace-Wells (supra n.4)

<sup>18</sup> See IPCC Report (supra n.5)

<sup>19</sup> Eckstein (supra n.11)

<sup>20</sup> Ibid

<sup>21</sup> Ibid

<sup>22</sup> Rosemary Rayfuse and Shirley V Scott (eds), *International Law in the Era of Climate Change* (Edward Elgar Publishing Ltd 2012)

<sup>23</sup> Ibid

determined.<sup>24</sup> Moreover, climate change is an issue which defies borders and sovereignty and so requires a greater amount of collective action and cooperation to surmount.<sup>25</sup> The death of States, the rise of armed conflict, and the inability or unwillingness of those remaining to cooperate collectively in order to fight this threat will disrupt the international order as we know it.

## 2.2 Pakistan

Pakistan is the fifth most climate-vulnerable nation in the world and will feel the effects of climate change acutely.<sup>26</sup> Between 1998 and 2018, the country faced 152 extreme weather events and around 10,000 lives were lost to climate-related disasters.<sup>27</sup> The last decade alone has produced around 30 million climate migrants in the nation.<sup>28</sup> Pakistan's primary climate change challenges are floods, drought, and sea intrusion. Glacier melt in the Himalayas and Karakoram is projected to increase flooding which will affect water resources and increase river flows.<sup>29</sup> This flooding is likely to damage oil, gas and power infrastructure resulting in power outages and shortages. After an initial increase in flow, the Indus river is predicted to have a reduced flow affecting freshwater availability, with consequent effects on agriculture and biodiversity. Coastal areas bordering the Arabian Sea in southern Pakistan will also be at risk of flooding from the sea.<sup>30</sup> There will be a high risk to life and property in these areas, primarily Karachi and other areas on the Sindh-Makran coast, this has been seen already this year with climate-aggravated flooding in the city. The sea level along the Karachi coast has risen by around 10 centimetres in the last century.<sup>31</sup> Coastal regions will suffer from erosion and seawater incursion and there will be a loss of habitation for wildlife and biodiversity.<sup>32</sup>

Pakistan is already experiencing climate change in the form of higher temperatures. In the last 50 years, the annual mean temperature in Pakistan has increased by roughly 0.5 degrees.<sup>33</sup> And the projected temperature increase in the country is expected to be higher than the global average. The 2015 heat-wave in Karachi took more than 1,200 lives.<sup>34</sup> Temperatures have increased since then – Jacobabad in Sindh could be the hottest place on earth with a temperature of 51.1°C recorded in June 2019.<sup>35</sup> Crop yields will decrease in Pakistan which will affect livelihoods and food production resulting in a high risk of hunger and food insecurity. There will also be population displacement caused by food insecurity and droughts

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<sup>24</sup> Ben Saul, 'Climate Change, Conflict and Security: International Law Challenges' (2009) 9 NZ Armed F L Rev 1

<sup>25</sup> Eckstein (supra n.11)

<sup>26</sup> New York Times, *Pakistan's most terrifying adversary is climate change*, Fatima Bhutto, September 29, 2020

<sup>27</sup> Ibid

<sup>28</sup> Ibid

<sup>29</sup> LEAD Pakistan, Basic Guide to Climate Change, [http://www.lead.org.pk/cc/basicguide\\_climate\\_change.html](http://www.lead.org.pk/cc/basicguide_climate_change.html)

<sup>30</sup> Ibid

<sup>31</sup> Climate Change Profile Of Pakistan, Asian Development Bank,

<https://www.adb.org/sites/default/files/publication/357876/climate-change-profile-pakistan.pdf>

<sup>32</sup> Ibid

<sup>33</sup> Ibid

<sup>34</sup> Al Jazeera, *Pakistan heatwave death toll climbs past 1,200*, June 27, 2015,

<https://www.aljazeera.com/news/2015/6/27/pakistan-heatwave-death-toll-climbs-past-1200>

<sup>35</sup> Time, *What It's Like Living in One of the Hottest Cities on Earth—Where It May Soon Be Uninhabitable*, Aryn Baker, September 12, 2019, <https://time.com/longform/jacobabad-extreme-heat/>

particularly in parts of Sindh and Balochistan.<sup>36</sup> The Special Assistant to the Prime Minister on Climate Change said in January 2019 that Pakistan has suffered a loss of Rs.14 billion due to climate change.<sup>37</sup>

Pakistan is one of the most arid countries globally and it is the third most water stressed country in the world. It also has one of the world's highest rates of annual population growth.<sup>38</sup> Research conducted by the Asian Development Bank has found that Pakistan has the lowest water availability per capita in the world.<sup>39</sup> Water demand is projected to grow in the next three decades chiefly for agriculture and it is predicted that by 2025, Pakistan will require 203 million acre-feet (MAF) of water to meet its needs, but water availability will only be 150 MAF, a 35 percent deficit.<sup>40</sup> A report by the World Wildlife Foundation from 2007 stated that "Pakistan's water is drying up, and what little remains is heavily polluted".<sup>41</sup> Pakistan's lack of water is therefore a source of existential anxiety for the country.

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<sup>36</sup> Pakistan Today, *Pakistan's water demand likely to grow by 40% in 30 years*, 13 March 2019, <https://www.pakistantoday.com.pk/2019/04/13/pakistans-water-demand-likely-to-grow-by-40-in-30-years/>

<sup>37</sup> Pakistan Today, *Climate Change cost Pakistan Rs 14 bn in last 20 years*, 26 December 2016, <https://www.pakistantoday.com.pk/2018/12/26/climate-change-cost-pakistan-rs14bn-in-last-20-years-pms-advisor/>

<sup>38</sup> Robert G. Wirsing, *Rivers in Contention: Is There a Water War in South Asia's Future?* 8 (Heidelberg Papers in S. Asian and Comparative Politics, Working Paper No. 41, 2008)

<sup>39</sup> Yasmin Siddiqi & Eelco Van Beek, *Asian Water Development Outlook 2016: Strengthening Water Security In Asia And The Pacific* (2016)

<sup>40</sup> Waseem Ahmad Qureshi, 'Political Dimension of Water Paucity in Pakistan' (2018) 19 *Fla Coastal L Rev* 1

<sup>41</sup> *Pakistan's Waters at Risk*, Special Report (Lahore: World Wildlife Foundation, February 2007)

### 3. Climate Change: A Driver of Armed Conflict?

Future wars will be those of communal survival, aggravated or, in many cases, caused by environmental scarcity. These wars will be subnational, meaning that it will be hard for states and local governments to protect their own citizens physically. This is how many states will ultimately die.<sup>42</sup>

Robert Kaplan, 'The Coming Anarchy', (February 1994)

#### 3.1 As A Direct Link

Many scholars have argued that climate change will directly result in more armed conflict as resource scarcity and mass migration will result in conflicts over resource-abundant territory and stable governments will deteriorate.<sup>43</sup> Homer-Dixon, a leading academic in this field, has argued that climate change will help produce "insurgencies, genocide, guerrilla attacks, gang warfare, and global terrorism".<sup>44</sup> This will be particularly so given wars are increasingly located in the poorest and most vulnerable countries of the world and these countries are also predicted to be the worst affected by climate change.<sup>45</sup> Militaries around the world are to a growing extent looking at climate change as a national security issue in anticipation of this threat.<sup>46</sup>

The research seems to support this with studies finding that changes in temperature do lead to more conflicts in sub-Saharan Africa with a 1% increase in temperature resulting in a 4.5% increase in civil war in that year.<sup>47</sup> Models indicate that by 2030 this may result in a 54% increase in conflict in the region.<sup>48</sup> The UNDP in its Human Development Report from 2011 also claimed that an estimated 40 percent of intrastate wars over the past 60 years are linked to natural resources, and at least 18 violent conflicts since 1990 have been fuelled by the exploitation of natural resources and other environmental factors.<sup>49</sup>

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<sup>42</sup> Robert Kaplan, 'The Coming Anarchy', *The Atlantic Monthly* (February 1994)

<sup>43</sup> Thomas Homer-Dixon, *Terror in the Weather Forecast*, *New York Times* (Apr. 24, 2007), <http://www.nytimes.com/2007/04/24/opinion/24homer-dixon.html>

<sup>44</sup> Implications of Climate Change for Armed Conflict, Halvard Buhaug, Nils Petter Gleditsch and Ole Magnus Theisen, presented to the World Bank workshop on Social Dimensions of Climate Change The World Bank, Washington DC, 5–6 March 2008

<sup>45</sup> *Ibid*

<sup>46</sup> See for instance, *The Observer*, *Pentagon tells Bush: climate change will destroy us*, 22 February 2004 and *Sydney Morning Herald*, *Climate threat in military's sights*, T Allard, 17 May 2007

<sup>47</sup> Our World, Does Climate Change Cause Conflict? 2009-11-27, Mark Notaras: <https://ourworld.unu.edu/en/does-climate-change-cause-conflict>

<sup>48</sup> *Ibid*

<sup>49</sup> UNDP, Human Development Report 2011, Sustainability and Equity: A Better Future for All, [http://hdr.undp.org/sites/default/files/reports/271/hdr\\_2011\\_en\\_complete.pdf](http://hdr.undp.org/sites/default/files/reports/271/hdr_2011_en_complete.pdf)

UN Secretary General's have routinely referred to climate change as a driver of armed conflict. For instance, Ban Ki-Moon in 2007 said the conflict in Darfur, Sudan was the world's first ever climate change conflict.<sup>50</sup> It was assumed that altered rainfall patterns due to climate change contributed to the war. This was subsequently exploited by the Sudanese government which argued that the conflict in Darfur was caused by environmental factors exogenous to the regime.<sup>51</sup> Similarly, the Syrian drought between 2006-10 was one of the factors leading to migration, unrest and war.<sup>52</sup> Rainfall shortages caused by climate change have also been said to be a root cause of the ongoing conflict in Yemen.<sup>53</sup>

Climate change can also drive armed conflict at the individual level. 'Angry young men' deprived of their livelihoods due to climate change and resource scarcity may be more easily recruited to fight in conflicts.<sup>54</sup> Youth of fighting age who find their basic needs are not met could choose to engage in conflict more readily.<sup>55</sup> Therefore, there is a significant amount of data which does support a direct link between climate change and armed conflict whether this is caused by increased displacement or resource scarcity.

### **3.2 As A Threat Multiplier**

However, many argue against there being a direct link between climate change and armed conflict.<sup>56</sup> Opponents of this view state that it is an oversimplification to assert that climate change is the primary factor when a complex range of causes are relevant.<sup>57</sup> They also point to the fact that the increase in global warming has occurred during a period when there has been a reduction in the frequency and severity of armed conflict.<sup>58</sup> A 2009 UN Secretary-General's report noted that there is only sparse and anecdotal data supporting a direct link between climate change and armed conflict. Even so, the report highlights that threats from climate change could include loss of territory, statelessness, an increase in displaced persons, and stress on shared water resources.<sup>59</sup>

Instead, it is argued, climate change functions as a 'threat multiplier' which loads the dice adding to stresses which makes conflict more likely.<sup>60</sup> This approach assumes that the effects of climate change,

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<sup>50</sup> Ban Ki-moon, What I Saw in Darfur: Untangling the Knots of a Complex Crisis, Washington Post, Sept. 14, 2007

<sup>51</sup> Ole Magnus Theisen, Nils Petter Gleditsch, Halvard Buhaug, Is climate change a driver of armed conflict? Climatic Change, January 2013

<sup>52</sup> Brian La Shier and James Stanish, 'The National Security Impacts of Climate Change' (2019) 10 J Nat'l Sec L & Pol'y 27

<sup>53</sup> Francesco Sindico, 'Climate Change and Security' (2017) 2017 CCLR 187

<sup>54</sup> Implications of Climate Change for Armed Conflict, Halvard Buhaug, Nils Petter Gleditsch and Ole Magnus Theisen, presented to the World Bank workshop on Social Dimensions of Climate Change The World Bank, Washington DC, 5-6 March 2008

<sup>55</sup> Patrick E Tolan Jr, 'Homeland Security Challenges of Global Climate Change' (2008) 54 Loy L Rev 800

<sup>56</sup> Theisen, Gleditsch, Buhaug (Supra n. 51)

<sup>57</sup> Ben Saul, 'Climate Change, Conflict and Security: International Law Challenges' (2009) 9 NZ Armed F L Rev 1

<sup>58</sup> Buhaug, Gleditsch, Theisen (supra n.54)

<sup>59</sup> See Christian Gray, Climate Change and International Law on the Use of Force, in Rosemary Rayfuse and Shirley V Scott (eds), International Law in the Era of Climate Change (Edward Elgar Publishing Ltd 2012)

<sup>60</sup> Washington Post, *Will climate change lead to more world conflict?* July 11, 2019, <https://www.washingtonpost.com/politics/2019/07/11/how-does-climate-change-impact-conflict-world/>

namely those of natural disasters, rising sea-levels and resource scarcity, will lead to lost livelihoods, economic decline, increased competition for the remaining resources, and insecurity due to forced migration.<sup>61</sup> These will in turn promote poverty, unrest, economic and political instability and heavy-handed responses from governments.<sup>62</sup> Consequently, there is increased motivation for violence resulting in conflict. Armed conflict is thus one of the ‘consequences of consequences’ of climate change.<sup>63</sup> This potential for war is all the more acute in fragile states with weak governments.<sup>64</sup>

This approach, of seeing climate change as a threat multiplier, has gained credence in recent years with policymakers and politicians focusing on the effects of the effects of climate change. For instance, a Presidential Memorandum from the Obama administration in 2016 states that “Climate change poses a significant and growing threat to national security, both at home and abroad.”<sup>65</sup> It mentions that the effects of climate change “can lead to population migration within and across international borders, spur crises, and amplify or accelerate conflict in countries or regions already facing instability and fragility.”<sup>66</sup>

However, even research which indicates a decrease in violent conflict notes that if “major ‘tipping points’ of societal stability are reached, climate change may become a major driver of armed conflict in the future.”<sup>67</sup> While it is hoped that States may engage increasingly in peacemaking efforts to avert these effects of climate change, is it likely that they will in fact do the opposite.

### 3.3 Water Wars

While resource scarcity is mostly predicted to exert an indirect influence over future insecurity, an exception is made by some scholars for freshwater as a particularly vital resource.<sup>68</sup> Water may, therefore, be *the* resource over which States wage war. Kofi Annan, UN Secretary-General at the time, stated as early as 2001 that “fierce competition for fresh water may well become a source of conflict and wars in the future.”<sup>69</sup> Ban Ki-Moon, his successor, repeated this concern in 2007 stating that “Water scarcity threatens economic and social gains and is a potent fuel for wars and armed conflict.”<sup>70</sup>

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<sup>61</sup> Theisen, Gleditsch, Buhaug (supra n. 51)

<sup>62</sup> Ibid

<sup>63</sup> Implications of Climate Change for Armed Conflict, Halvard Buhaug, Nils Petter Gleditsch and Ole Magnus Theisen, presented to the World Bank workshop on Social Dimensions of Climate Change The World Bank, Washington DC, 5–6 March 2008

<sup>64</sup> Is climate change a driver of armed conflict? Climatic Change, January 2013, Ole Magnus Theisen, Nils Petter Gleditsch, Halvard Buhaug

<sup>65</sup> Presidential Memorandum, Climate Change and National Security, September 21, 2016, <https://obamawhitehouse.archives.gov/the-press-office/2016/09/21/presidential-memorandum-climate-change-and-national-security>

<sup>66</sup> Ibid

<sup>67</sup> Jurgan Scheffran and Michael Brzoska and Jasmin Kominek and P Michael Link and Janpeter Schilling, 'Disentangling the Climate-Conflict Nexus: Empirical and Theoretical Assessment of Vulnerabilities and Pathways' (2012) 4 Rev Eur Stud 1

<sup>68</sup> Buhaug, Gleditsch, Theisen (supra n.54)

<sup>69</sup> Eckstein (supra n.11)

<sup>70</sup> United Nations Secretary-General Ban Ki Moon, Asia-Pacific Water Summit (2007)

According to O’Lear and Tuten, “water attracted the highest level of U.S. national security attention concerning its potential role in future conflicts.”<sup>71</sup> There are concerns that water problems combined with poverty, unrest and weak institutions may lead to the threat of a failed state.<sup>72</sup> Water scarcity may result in the weaponisation of water.<sup>73</sup> The strategic and military use of water has already been demonstrated by the Islamic State which threatened to destroy a dam in Mosul and diverted water to stop the Iraqi Army from advancing.<sup>74</sup> Similarly, Al-Shabaab also cut off water to cities in Somalia to show its capabilities and dams were attacked in the Syrian civil war.<sup>75</sup>

A 2012 report by the Office of the U.S. Director of National Intelligence (ODNI) noted that South Asia, the Middle East and North Africa are likely to face significant issues in coping with water-related issues due to management concerns regarding river basins including the Nile, Euphrates and Indus.<sup>76</sup> Water scarcity will be particularly bad in Asia, which hosts 60% of the world's population but only 36% of its water resources.<sup>77</sup> However, research indicates that international river systems are associated with low-level conflicts and diplomatic tensions, moreover, the growing number of water agreements between countries hints at increased cooperation.<sup>78</sup> India and Pakistan’s relations over water have often been cited in support of the notion that the fear of water wars will not materialise. The Indus Water Treaty has continued despite conflicts between the two countries. However, the ODNI report mentioned above concluded that “where water tensions historically have led to increased water-sharing agreements rather than violent conflict, acute water shortages over the next ten years will likely change this trend.”<sup>79</sup>

The Pacific Institute records all incidents of violence over water, these include low-level fights over access to water but also armed struggles over water points, and indicate a worrying trend of growing water-aggravation:<sup>80</sup>

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<sup>71</sup> Shannon O’Lear and Adalric H Tuten, 'Environment and Conflict: Security, Climate Change, and Commodity Resources' (2013) 14 Seton Hall J Dipl & Int'l Rel 97

<sup>72</sup> Brian La Shier and James Stanish, 'The National Security Impacts of Climate Change' (2019) 10 J Nat'l Sec L & Pol'y 27

<sup>73</sup> Ibid

<sup>74</sup> Ibid

<sup>75</sup> Pacific Institute, Water Is a Source of Growing Tension and Violence in the Middle East, August 29, 2018, <https://pacinst.org/water-is-a-source-of-growing-tension-and-violence-in-the-middle-east/>

<sup>76</sup> Brian La Shier and James Stanish, 'The National Security Impacts of Climate Change' (2019) 10 J Nat'l Sec L & Pol'y 27

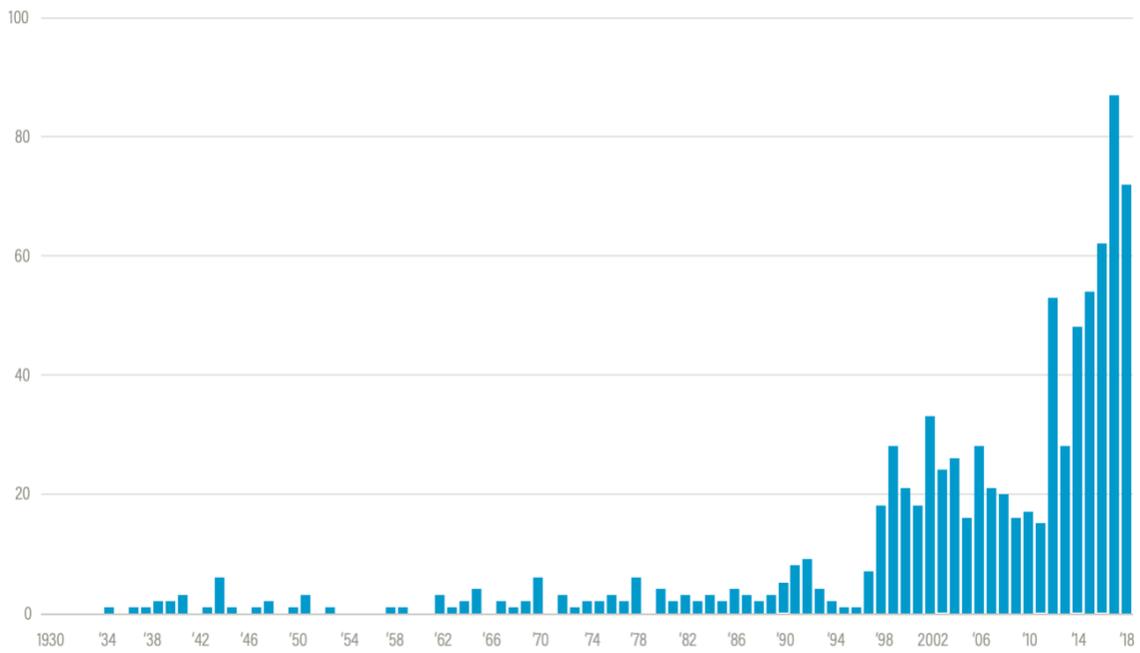
<sup>77</sup> Ben Saul, 'Climate Change, Conflict and Security: International Law Challenges' (2009) 9 NZ Armed F L Rev 1

<sup>78</sup> Scheffran, Brzoska, Kominek, Link and Schilling (supra n.67)

<sup>79</sup> Shannon O’Lear and Adalric H Tuten, 'Environment and Conflict: Security, Climate Change, and Commodity Resources' (2013) 14 Seton Hall J Dipl & Int'l Rel 97

<sup>80</sup> Pacific Institute, National Geographic ScienceBlogs: Water, Security, and Conflict: Violence over Water in 2015, <https://pacinst.org/water-security-and-conflict-violence-over-water-in-2015/>

**Figure 1 | The Trend in Incidences of Violence Associated with Water Resources and Water Systems, 1930 to 2018**



Source: Gleick (2018), October 2019 update.

## 4. Can International Law deal with Climate Change-Driven Conflicts?

This section will examine the frameworks under international law applicable to climate-change driven conflicts between states. It will consider the relevant principles in these regimes as well as those which may be adapted in the future to govern climate change related incidents.

### 4.1 International Law of Climate Change

#### 4.1.1 The UNFCCC, Kyoto Protocol, and Paris Agreement

The international law of climate change consists of three instruments; the UN Framework Convention on Climate Change (1992), the Kyoto Protocol to the Framework Convention on Climate Change (1998), and the Paris Agreement (2015). The UNFCCC aims to avert “dangerous anthropogenic interference with the climate system” by stabilising greenhouse gas concentrations and focuses on mitigation and adaptation strategies.<sup>81</sup> It obliged parties to cooperate with each other and established a general framework which included annual Conference of the Parties (COP) sessions for negotiation and decision-making regarding any amendments and protocols to the Convention. However, it delineated few specific substantive obligations to curb climate change. Ongoing scientific research continued to support the need for mandatory measures like binding targets and timetables for reduction of greenhouse gases.

As a result, the 1997 Kyoto Protocol to the UNFCCC was passed which established binding reduction targets for developed states and economies in transition.<sup>82</sup> However, no targets were imposed on developing states. The basis for this is the notion that developing countries have been subjected to historical and economic injustices by developed nations and as a result they should not have to bear the brunt of reductions in greenhouse gas emissions they have contributed little to.<sup>83</sup> The Protocol required the reduction of emissions on average 5% below 1990 levels by 2012.<sup>84</sup> US President George Bush announced in 2001 that he would not ratify.<sup>85</sup> In 2011, Canada, Japan and Russia stated that they would not take on further Kyoto targets and Canada officially withdrew from the agreement in 2012.<sup>86</sup> The Doha Agreement under which negotiations were to be held to extend the Protocol was also not ratified.<sup>87</sup>

The Paris Agreement was then signed in 2015 which is an agreement within the UNFCCC.<sup>88</sup> The goal was to keep global warming well below 2°C with a preferred target of 1.5°C.<sup>89</sup> Under the Paris

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<sup>81</sup> United Nations Framework Convention on Climate Change, May 9, 1992, 1771 U.N.T.S. 107

<sup>82</sup> Kyoto Protocol to the United Nations Framework Convention on Climate Change, Dec. 11, 1997, 2303 U.N.T.S.

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<sup>83</sup> See common but differentiated responsibility principle in Principle 7 of the 1992 Rio Declaration

<sup>84</sup> See Article 3(1) of the Kyoto Protocol

<sup>85</sup> The Guardian, *Bush kills global warming treaty*, March 29, 2001

<sup>86</sup> The Guardian, *Canada pulls out of Kyoto protocol*, December 12, 2011

<sup>87</sup> Amendment to the Kyoto Protocol Pursuant to Article 3, Paragraph 9 (the Doha Amendment), in the Annex of Decision 1/CMP.8, U.N. Doc. FCC/KP/CMP/2012/13/Add.1 (Dec. 8, 2012)

<sup>88</sup> UNFCCC, Report of the Conference of the Parties, 21st Sess., U.N. Doc. FCCC/CP/2015/10 (Dec. 12, 2015)

<sup>89</sup> Article 2

Agreement, states set their own nationally determined contributions which are determined at the country's discretion but which must be revised every 5 years and revised so that they are more ambitious.<sup>90</sup> These nationally determined contributions are voluntary and have led to criticisms that the treaty is not legally binding. However, every States' submitted contributions can be viewed as unilateral declarations which are binding.<sup>91</sup> The non-enforceable and programmatic nature of the provisions in the treaty make it harder for States which are to be potentially existentially threatened by climate change such as small island states to bring a case before international courts.<sup>92</sup>

While a global stocktake under the Paris Agreement will occur in 2023, almost all States are failing to meet their goals under the treaty.<sup>93</sup> Given the US, the world's historically largest emitter, has left the Paris Agreement, it seems it is doomed like the Kyoto Protocol to fail given States' insufficiency in fulfilling their promises under the conventions. In fact, emissions are actually growing; by 1.6 percent in 2016 and 2.7 percent in 2017.<sup>94</sup> In sum, the law of climate change will not be adequate to stave off climate change or climate change fuelled-conflicts.

#### 4.1.2 Customary International Environmental Law

There are also principles under customary international environmental law which may be applied to climate change:

- The 'no harm' principle.

This was established in the *Trail Smelter* case of 1941 where it was held that no State has the right to use or permit the use of its territory in such a manner as to cause injury to properties and persons situated in another territory.<sup>95</sup> This has developed into a general principle that States are not to allow their territory from being used in such a way as to cause harm to another State as held by the International Court of Justice in the *Corfu Channel* case.<sup>96</sup> This principle is also found in the Stockholm Declaration,<sup>97</sup> the Rio Declaration,<sup>98</sup> and in the preamble to the UNFCCC. It was confirmed as customary international law by the ICJ in the *Nuclear Weapons Advisory Opinion* in which it stated that the "existence of the general obligation of States to ensure that activities within their jurisdiction and control respect the environment of other States or of areas beyond national control is now part of the corpus of international law relating to the environment."<sup>99</sup> Arguably, this principle is difficult to implement in the climate change context

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<sup>90</sup> Article 4

<sup>91</sup> Martin (supra n.6)

<sup>92</sup> Francesco Sindico, 'Climate Change and Security' (2017) 2017 CCLR 187

<sup>93</sup> ZME Science, Almost all countries are failing their Paris Agreement contributions, November 2019, <https://www.zmescience.com/ecology/almost-all-countries-are-failing-their-paris-agreement-contributions/>

<sup>94</sup> Ibid

<sup>95</sup> Trail Smelter Arbitration (*United States v. Canada*), 3 U.N. Rep. Int'l Arb. Awards 1905 (1941)

<sup>96</sup> Corfu Channel (*U.K. v. Albania*), 1949 I.C.J. 4 (Apr. 9)

<sup>97</sup> United Nations Conference on the Human Environment, Stockholm, Swed., June 5– 16, 1972, Declaration of the United Nations Conference on the Human Environment, U.N. Doc. A/CONF.48/14/Rev.1

<sup>98</sup> United Nations Conference on Environment and Development, Rio Declaration on Environment and Development, U.N. Doc. A/CONF.151/26 (Vol. I) (Aug. 12, 1992)

<sup>99</sup> Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion, 1996 I.C.J. 226 (July 8), [29]

where all greenhouse gas emissions by States result in a diffuse harm impacting differently around the world.<sup>100</sup> In fact, Vanuatu and other Pacific Island governments are currently exploring whether a request for an Advisory Opinion from the International Court of Justice on climate change might be pursued.<sup>101</sup> The ‘no harm’ principle is likely to be integral to the question submitted to the court.<sup>102</sup>

- The principle of **cooperation**.

This is codified in the Stockholm Declaration, the Rio Declaration, and in the Preamble to the UNFCCC, and is arguably a principle of customary international law. This obliges states to engage in international cooperation necessary to control, prevent, reduce and eliminate adverse environmental effects resulting from activities carried out in all spheres. While the implementation of this principle is urgently required in order to combat climate change globally it is too vague to enforce in a justiciable way.

- The **precautionary** principle.

This is also a part of international environmental law relevant to climate change. As codified in Principle 15 of the Rio Declaration, it provides that “where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.” While this is also applicable in the context of climate change it does offer a great amount of latitude to States wishing to evade compliance by obliging them to undertake ‘cost-effective’ measures. It is also particularly difficult for developing countries which will suffer the most from environmental degradation and lack the financial resources to take precautionary measures.

- The principle of **sustainable development**.

This principle also applies in international environmental law and is relevant in the context of climate change as it obliges States to develop sustainably, in that environmental protection is to constitute an integral part of the development process and cannot be considered in isolation from it. The ICJ in the *Gabčíkovo-Nagymoros* case defined this obligation as requiring States to reconcile economic development with protection of the environment.<sup>103</sup> As the ICJ has already adjudicated on this issue, it may prove to be the most easiest to enforce by States wishing to hold other States responsible for pursuing development which may exacerbate emissions or the effects of climate change.

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<sup>100</sup> Martin (supra n.6)

<sup>101</sup> Maritime Executive, *Low-Lying Pacific Islands Sue Over Climate Change*, October 30, 2019, <https://www.maritime-executive.com/editorials/low-lying-pacific-islands-sue-over-climate-change>

<sup>102</sup> See Legal Response Initiative, Briefing Paper, ‘No-harm rule’ and climate change, July 24, 2012, <https://legalresponse.org/wp-content/uploads/2013/07/BP42E-Briefing-Paper-No-Harm-Rule-and-Climate-Change-24-July-2012.pdf>

<sup>103</sup> *Gabčíkovo–Nagymaros Project (Hungary v. Slovakia)*, Judgment, 1997 I.C.J. Rep. 7, [140] (Sept. 25)

## 4.2 International Law on the Use of Force

The prohibition on the use of force in Article 2(4) of the UN Charter is subject to two exceptions: self-defence under Article 51 and collective security operations under the Security Council.<sup>104</sup> It is also argued that there is a third exception, that of humanitarian intervention, though this is hotly contested in international law. The applicability of these exceptions to climate change-driven conflicts will be evaluated in this section.

### 4.2.1 Collective Security Operations

The Security Council can take action under Article 39 and Chapter VII where there is a threat to international peace and security. The question then is whether climate change would be considered ‘threat to international peace and security’ if a wide reading of this term was adopted.<sup>105</sup> As discussed, the link between climate change and armed conflict has been challenged with some arguing that it is tenuous. Consequently, it is debatable whether it should fall under the Security Council’s jurisdiction. Indeed Gray argues that it is better for human security to “reaffirm the wide prohibition on the use of force rather than to seek loopholes by which to promote military solutions to problems addressed by other means”.<sup>106</sup> The Security Council has held debates on climate change in 2007 (initiated by the UK), in 2011 (initiated by Germany), two in 2014, and 2017.<sup>107</sup> Some argue that the mere holding of a debate suggests that climate change has been elevated into being a recognised security issue.<sup>108</sup> However, these are informal debates which do not lead to the adoption of formal resolutions or documents although they do encourage climate diplomacy in order to push global warming as an agenda item.

There is potential for climate change to constitute a threat to international peace and security in the future. It already has categorised the Ebola pandemic as constituting such a threat in 2014.<sup>109</sup> Martin argues that the Council could declare climate change to be a threat to international peace and security under Article 39 from which “it is but a small step to demand collective action under Chapter VII of the Charter, beginning with economic sanctions, and leading all the way to calls for authority to threaten or use force under Art. 42 of the Charter” against ‘climate rogue states’ which flagrantly violate their climate change obligations.<sup>110</sup> However, this is unlikely as the permanent members of the Council are the worst contributors to climate change. Though it may result in more referrals of the matter to the General Assembly through the Uniting for Peace resolution.<sup>111</sup>

In 2011, the President of the Security Council released a Statement on behalf of the Council in which he noted that the General Assembly and Economic and Social Council are primarily responsible for

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<sup>104</sup> United Nations, Charter of the United Nations, 24 October 1945, 1 UNTS XVI

<sup>105</sup> See Christian Gray, Climate Change and the Law on the Use of Force, in Rosemary Rayfuse and Shirley V Scott (eds), *International Law in the Era of Climate Change* (Edward Elgar Publishing Ltd 2012)

<sup>106</sup> *Ibid*

<sup>107</sup> Francesco Sindico, 'Climate Change and Security' (2017) 2017 CCLR 187

<sup>108</sup> Francesco Sindico, 'Climate Change: A Security (Council) Issue' (2007) 2007 Carbon & Climate L Rev 29

<sup>109</sup> S.C. Res. 2177, U.N. Doc. S/RES/2177 (2014)

<sup>110</sup> *Opinio Juris*, Craig Martin, *Climate Wars and Jus ad Bellum: Part I*, August 13, 2020, <http://opiniojuris.org/2020/08/13/climate-wars-and-jus-ad-bellum-part-i/>

<sup>111</sup> See also *Opinio Juris*, Craig Martin, *Climate Wars and Jus ad Bellum: Part II*, August 13, 2020, <http://opiniojuris.org/2020/08/13/climate-wars-and-jus-ad-bellum-part-ii/>

discussions relating to climate change and the Council will become involved when these culminate in specific threats to international peace and security.<sup>112</sup> The General Assembly did pass a resolution in 2009 on 'Climate change and its possible security implications' in which it expressed concern about the security implications of the adverse effects of climate change.<sup>113</sup> It also required the Secretary-General to submit a report on climate change and security which was submitted the following year.<sup>114</sup> He noted that despite the fact that 'empirical evidence on the relationship between climate change and conflict remains sparse and largely anecdotal' environmental factors may exacerbate conflict dynamics and essentially act as a threat multiplier.<sup>115</sup>

In sum, climate change may constitute a threat to international peace and security in the future justifying its regulation by the Security Council. The likelihood of this leading to a collective security operation, given the constitution of the Council's permanent members, will remain slim. However, collective operations could be undertaken if matters of climate change are referred to the General Assembly under the Uniting for Peace resolution.

#### 4.2.2 *Self-Defence/Atmospheric Interventions*

Martin argues that States may decide to relax the conditions for self-defence to justify the use of force against climate rogue states or there may be a new exception which he names atmospheric interventions, in the vein of the other controversial exception, humanitarian intervention.<sup>116</sup> He contends that we have seen similar advancements with the rise of pre-emptive self-defence and the unwilling and unable doctrine justifying the use of force against non-state actors.<sup>117</sup> The remaining framework governing the law of self-defence would remain in place - namely, the requirements that it be necessary and proportionate within these new exceptions.<sup>118</sup> However, any such changes in the jus ad bellum framework will increase the likelihood of conflict. Martins acknowledges this and retorts that "If changes to the jus ad bellum regime could help with changing state behavior on climate change, then it might thus be justified, even if they increase the risk of war."<sup>119</sup> He does also note that any such securitisation of climate change may lead to the use of force against weaker States in the global South.<sup>120</sup> It may also frustrate attempts to deal with climate change in a way which relies on cooperation and coordination.

Therefore, whilst the jus ad bellum regime may be adapted to allow for recourse to force against climate rogue states, it risks abuse in such an expansion. There are justified concerns on the part of developing States that developed countries wish to 'securitise' climate change in order to impose their own climate

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<sup>112</sup> Erik V Koppe, 'Climate Change and Human Security during Armed Conflict' (2014) 8 Hum Rts & Int'l Legal Discourse 68

<sup>113</sup> General Assembly resolution 63/281 (2009)

<sup>114</sup> A/64/350, Climate Change and Its Possible Security Implications, Report of the Secretary- General of 11 September 2011

<sup>115</sup> Ibid

<sup>116</sup> *Opinio Juris*, *Craig Martin, Climate Wars and Jus ad Bellum: Part II*, August 13, 2020, <http://opiniojuris.org/2020/08/13/climate-wars-and-jus-ad-bellum-part-ii/>

<sup>117</sup> Ibid

<sup>118</sup> Ibid

<sup>119</sup> Ibid

<sup>120</sup> Ibid

agenda.<sup>121</sup> Any relaxation of the conditions under Article 51 of the UN Charter must accommodate these concerns.

### **4.3 International Water Law**

The only applicable international instrument relating to transboundary water resources relevant to climate change is the UN Convention on Non-Navigational Uses of International Watercourses (1997).<sup>122</sup> This agreement entered into force in 2014 after it was ratified by 35 states. It proves to be influential but has been said to lack teeth given the small number of ratifying states and the number of years before it entered into effect.<sup>123</sup> The treaty defines an ‘international watercourse’ as a watercourse situated in several states.

There are two cornerstone principles of international water law which are customary and apply to cross-border water issues. These are:

- **Equitable and reasonable utilization**

This gives all riparian states a correlative right to equitably share the benefits of a river and requires them to use the river equitably and reasonably.<sup>124</sup>

- **No significant harm**

This limits a state’s sovereign right to use its territory by requiring that it causes no significant harm to another state. Article 7 obliges states to take all appropriate measures to prevent the causing of significant harm to other watercourse States’, when using watercourses on their own territory. Moreover, if significant harm ensues, there is a duty to use ‘all appropriate measures’ to restore the situation prior to the damage or mitigate the damage and provide compensation where it is necessary’.

These principles are also found in the Convention on the Protection and Use of Transboundary Watercourses and International Lakes (1996). The UN Watercourses Convention, the Convention on the Protection and Use of Transboundary Watercourses and International Lakes, and the Helsinki and Berlin Rules also endorse cooperation and management of international water resources.<sup>125</sup> None of these principles, however, obliges States to manage their resources in a way which mitigates against the consequences of climate change. In effect, States will protect their own sovereignty and may refuse to share a greater burden than other states sharing a river basin even if it may ameliorate the effects of climate change. A collaborative approach is also largely premised on the relationship a state shares with its hydrological neighbours. Where these relations are bad, it is unlikely that States will coordinate effectively to share a resource.

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<sup>121</sup> Ibid

<sup>122</sup> Convention on the Law of the Non-Navigational Uses of International Watercourses, New York, 21 May 1997, United Nations Treaty Series, vol. 2999, Doc. A/51/869. C.N.353.2008

<sup>123</sup> Sahana Rao, ‘Governance of Water Resources Shared by India and Pakistan under the Indus Waters Treaty: Successful Elements and Room for Improvement’ (2017) 25 NYU Env’tl LJ 108

<sup>124</sup> See Convention on the Non-Navigational Uses of International Watercourses, G.A. Res. 51/229, Art. 5

<sup>125</sup> See Article 8 of the UN Convention and Article 11 of the Berlin Rules (these replaced the Helsinki Rules in 2004)

Moreover, determining whether use is equitable and reasonable is difficult especially “where the equity and reasonableness of a water use, as well as the magnitude of the harm, are mere projections”.<sup>126</sup> This is usually only possible through a neutral third-party determination. Therefore, even States which wish to comply with these principles may find it hard to do so especially when they are unable to gauge what is equitable and reasonable and even what harm could entail. As a result, international water law principles require far more clarification as well as effective enforcement in order to facilitate States compliance and cooperation to mitigate the effects of climate change-aggravated water conflicts.

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<sup>126</sup> Eckstein (supra n.11)

## 5. Case Study: Pakistan-India Water Relations

Because international freshwater is shared, unequally divided, scarce, and has the potential of being mismanaged, nations often have two choices: conflict or cooperation.<sup>127</sup>

Shlomi Dinar, 'Water, Security, Conflict, and Cooperation', (2002)

### 5.1 The Indus and Climate Change

The Indus is the twelve largest river system in the world, with a flow which is twice as large as the River Nile.<sup>128</sup> It originates in the Tibetan plateau and is spread among four countries; Afghanistan, Pakistan, India and China, with nearly two thirds of the river flowing through Pakistan.<sup>129</sup> The Indus River Basin is sustained in large part by water flowing from glacial melt as well as monsoon rainfall.<sup>130</sup> Water flow is projected to increase in the short term due to climate change and increased temperatures. However, the reduced glacial melt is then expected to diminish the Indus rivers water flow by 30-40 percent.<sup>131</sup> The basin is now considered to be 'closed' in that water supply has fallen short of water demand.<sup>132</sup> Flow has reduced so much that at times the Indus does not even reach the sea.<sup>133</sup>

The basin covers 65 percent of Pakistan and 14 percent of India.<sup>134</sup> The water in the basin is heavily overallocated, and there is not enough water for current uses, let alone projected needs.<sup>135</sup> This will affect the 300 million people in India and Pakistan which rely on the river for sustenance, in a region which is the poorest and fastest growing in the world.<sup>136</sup> Pakistan is heavily reliant on the Indus water basin as it is its primary source of water and irrigates 80 percent of its agriculture.<sup>137</sup> Both countries rely on the river for hydroelectric power as a solution to their energy shortfalls which will only rise with growing populations.<sup>138</sup>

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<sup>127</sup> Shlomi Dinar, Water, Security, Conflict, and Cooperation, 22 SAIS REV. 229, 248 (2002)

<sup>128</sup> Christopher R Rossi, 'Blood, Water, and the Indus Waters Treaty' (2020) 29 Minn J Int'l L 103

<sup>129</sup> Sahana Rao, 'Governance of Water Resources Shared by India and Pakistan under the Indus Waters Treaty: Successful Elements and Room for Improvement' (2017) 25 NYU Env'tl LJ 108

<sup>130</sup> Ibid

<sup>131</sup> Erum Sattar and Jason Robison and Daniel McCool, 'Evolution of Water Institutions in the Indus River Basin: Reflections from the Law on the Colorado River' (2018) 51 U Mich JL Reform 715

<sup>132</sup> Waseem Ahmad Qureshi, 'Combating Climate Change in the Indus River Basin' (2017) 10 Ky J Equine Agric & Nat Resources L 1

<sup>133</sup> Ibid

<sup>134</sup> Rossi (supra n.128)

<sup>135</sup> Sattar, Robison and McCool (supra n.131)

<sup>136</sup> Rao (supra n.129)

<sup>137</sup> Rossi (supra n.128)

<sup>138</sup> Sattar, Robison and McCool (supra n.131)

## 5.2 Historical Perspective

Upon independence, British India was partitioned into India and Pakistan in 1947 and the Indus River was similarly divided between the two countries. However, a dispute soon broke out between the states on the matter of the princely state of Kashmir where all of Pakistan's water sources lie and which rendered India the upper riparian state.<sup>139</sup> In order to secure its water interests, Pakistan signed a one-year Standstill Agreement with India on December 20, 1947 under which India agreed that it would not withhold water without giving Pakistan time to develop alternate sources.<sup>140</sup> When the agreement expired, India stopped the flow of all water to Pakistan arguing that by agreeing to pay for water flow, Pakistan had accepted India's superior water rights.<sup>141</sup> Pakistan meanwhile argued that the payments were to cover maintenance costs, not for the rights to water.<sup>142</sup> India's control over Pakistan's water supply crippled its economy and the two countries were forced to negotiate. Pakistan had even considered taking the matter to the Security Council.<sup>143</sup> The World Bank offered to mediate in 1952 and brokered the Indus Waters Treaty which came into effect on April 1, 1960.<sup>144</sup> It was signed by the Indian prime minister, Jawaharlal Nehru, and the Pakistani president, Ayub Khan.

## 5.3 Indus Waters Treaty (1960)

The Indus Waters Treaty governs water apportionment of the Indus river basin on the basis of water division rather than water sharing arrangement.<sup>145</sup> It is often cited as a successful case study in cooperation over a shared resource as the agreement has lasted through six decades and conflicts between the two countries. The agreement allocates the eastern rivers of the Indus (the Ravi, Sutlej, and Beas) to India and the western rivers (the Jhelum, Chenab, and Indus) to Pakistan. All three of these rivers flow through Kashmir before entering Punjab.<sup>146</sup> The agreement restricts India's upstream uses and the amount of water India may draw for its permitted uses.<sup>147</sup> India was granted use of the western waters for four purposes; domestic, non-consumptive, agricultural use and for hydro-electric power generation.<sup>148</sup> It was otherwise required to 'let flow all the waters of the western rivers'.<sup>149</sup> Similarly Pakistan has exclusive rights over its rivers "except for uses essential to India where those rivers flowed through that country".<sup>150</sup>

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<sup>139</sup> Rossi (supra n.128)

<sup>140</sup> Rao (supra n.129)

<sup>141</sup> Waseem Ahmad Qureshi, 'Combating Climate Change in the Indus River Basin' (2017) 10 Ky J Equine Agric & Nat Resources L 1

<sup>142</sup> Ibid

<sup>143</sup> Uttam Kumar Sinha, Arvind Gupta & Ashok Behuria (2012) Will the Indus Water Treaty Survive?, Strategic Analysis, 36:5, 735-752, DOI: 10.1080/09700161.2012.712376

<sup>144</sup> The Indus Waters Treaty 1960, India-Pak., Sept. 19, 1960, 419 U.N.T.S. 125

<sup>145</sup> Rossi (supra n.128)

<sup>146</sup> Rossi (supra n.128)

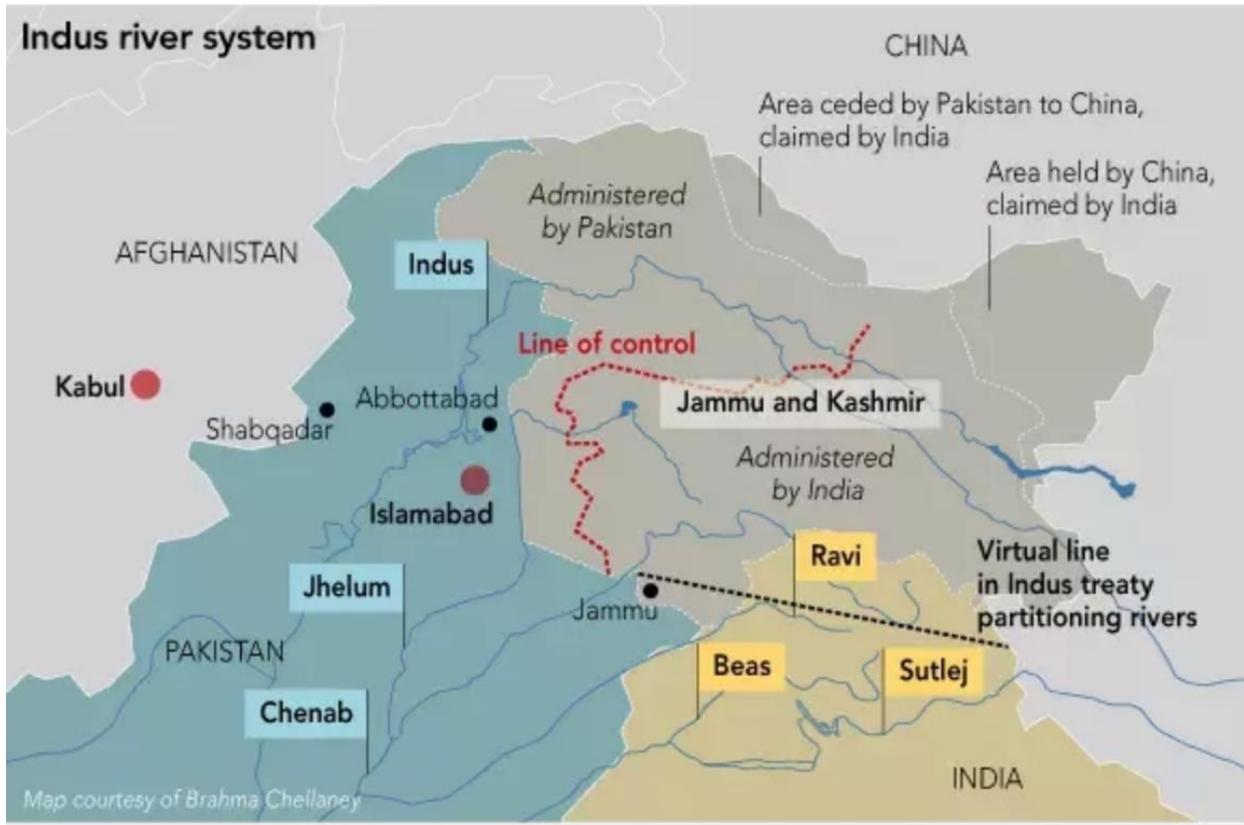
<sup>147</sup> Rao (supra n.129)

<sup>148</sup> See Article III, IWT

<sup>149</sup> Ibid, Article III (2), IWT

<sup>150</sup> See Rossi (supra n.128) and Article II, IWT

Both parties agreed that any non-consumptive use will not be done in a way that materially changes the flow to the other.<sup>151</sup>



### 5.3.1 The Kashmir Issue

The agreement circumvents the issue of sovereignty over Kashmir entirely<sup>152</sup> which was necessary in order for both countries to actually negotiate the treaty. Otherwise, the disputed nature of Jammu and Kashmir would serve as a hurdle to any form of agreement. However, this sidestepping also ignores the fact that Nehru sent a letter to the President of the World Bank at the time to “take due care of the needs and requirements of the people of Jammu and Kashmir when finalising the terms of the treaty”.<sup>153</sup> This was not achieved as Kashmiris are not mentioned anywhere in the text nor are the water needs of Jammu and Kashmir.

### 5.3.2 Key Provisions

The key provisions of the Indus Waters Treaty are summarised below:

<sup>151</sup> See Article IV (2), IWT

<sup>152</sup> Rossi (supra n.128)

<sup>153</sup> Uttam Kumar Sinha , Arvind Gupta & Ashok Behuria (2012) Will the Indus Water Treaty Survive?, Strategic Analysis, 36:5, 735-752, DOI: 10.1080/09700161.2012.712376

- **Use:**
  - India is allocated the eastern rivers of the Indus (the Ravi, Sutlej, and Beas) and the western rivers (the Jhelum, Chenab, and Indus) are allocated to Pakistan.<sup>154</sup>
  - India can use the western rivers for domestic, nonconsumptive, agricultural and power uses but must otherwise let the waters flow.<sup>155</sup>
  - Pakistan has exclusive use over its rivers except for India's essential uses.<sup>156</sup>
  - India can construct run-of-the-river projects on the western rivers to produce electricity.<sup>157</sup>
  - India can only construct storage facilities on the western rivers within proscribed limits.<sup>158</sup>
- **Cooperation:**
  - It expresses the intention of both states to cooperate to the fullest extent possible.<sup>159</sup>
  - Data is to be shared at the end of each month of daily-recorded water levels in each of the rivers with delays of no more than three months.<sup>160</sup>
  - Parties are obliged to share data with each other with no exceptions and it is obligatory for them to share information related to planned works.<sup>161</sup>
  - If additional data is requested, this is to be provided, with the costs of collecting and sharing this data to be reimbursed.<sup>162</sup>
  - India and Pakistan must cooperate with each other to establish observation stations to study the hydrological cycle.<sup>163</sup>
  - They are recommended to cooperate to develop the Indus Basin and implement engineering works for better water management.<sup>164</sup>
  - The treaty creates a joint body called the Permanent Indus Commission to facilitate cooperation and resolve differences between the two countries.<sup>165</sup> This consists of officials from both states and the commissioners are to exchange all relevant data, notices and other duties assigned by their countries and handle all communication.<sup>166</sup> They must meet at least once a year and are given certain immunities to discharge their functions effectively.<sup>167</sup> They are also to resolve any questions of fact which may be raised by the parties which may constitute a breach of the treaty.<sup>168</sup>
- **Dispute Resolution:**

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<sup>154</sup> See Article II and III, IWT

<sup>155</sup> Article III (2), IWT

<sup>156</sup> Article II, IWT

<sup>157</sup> Article III (2)(d) and Annexure D, IWT

<sup>158</sup> Article III (4), IWT

<sup>159</sup> Article VII (1), IWT

<sup>160</sup> Article VI, IWT

<sup>161</sup> Article VII, IWT

<sup>162</sup> Article VI (2), IWT

<sup>163</sup> Article II (4), IWT

<sup>164</sup> Article VII, IWT

<sup>165</sup> Article VIII, IWT

<sup>166</sup> Ibid

<sup>167</sup> Ibid

<sup>168</sup> Article IX (1), IWT

- The dispute resolution process is as follows<sup>169</sup> - the Commission is to resolve any ‘question’ by the parties which relates particularly to the interpretation and application of the treaty or a fact that may be deemed a breach of the treaty. If it is unable to do so then it becomes a ‘difference’ and is referred to a Neutral Expert to settle if the matter falls within the list of specified questions in Annexure F Part 1. The matter may be settled by a decision by the Neutral Expert which will be binding on both parties. However, if a solution is still not reached or the matter does not fall within Annexure F Part 1, the difference becomes a ‘dispute’ and a resolution may be negotiated between the countries’ governments or by a court of arbitration.
- The Neutral Expert option was availed once in 2005 to determine the Baglihar dam issue and the Permanent Court of Arbitration resolved a dispute in 2013 relating to the Kishenganga Dam project after bilateral negotiations failed.
- **Modification:**
  - The treaty allows for modification through a ratified treaty signed by both countries.<sup>170</sup> It does not contain an exit clause and so cannot be abrogated.

### 5.3.3 ‘Differences’ and ‘Disputes’ under the Treaty

#### 5.3.3.1 Baglihar Dam

Pakistan lodged a formal objection to the Baglihar dam and storage lake hydropower project that India had started building in 1999 on the Chenab River in Jammu and Kashmir.<sup>171</sup> It complained that the design of the dam allowed for Indian control over the flow of the western rivers to Pakistan. There were two formal rounds of bilateral negotiations which failed to resolve the issue during which construction continued. Pakistan accused India of using delaying tactics while expediting construction. According to Pakistan, construction of the dam denied water to around 13 million acres of farmland.<sup>172</sup> This apparently caused a loss of 5 billion rupees worth of crops and forced farmers to change their crops.<sup>173</sup> It also affected water supply for power generation and resulted in a shortage of power for steel plants and textile mills.<sup>174</sup>

In 2005, Pakistan applied to the World Bank for a Neutral Expert to resolve this ‘difference’.<sup>175</sup> The World Bank agreed that a ‘difference’ had arisen and a Neutral Expert was appointed. The Neutral Expert ‘relied on the rules of the Vienna Convention on the Law of Treaties which reflect customary international law with regard to ordinary methods of treaty interpretation.’<sup>176</sup> He also noted that the rights

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<sup>169</sup> Articles VIII and IX, IWT

<sup>170</sup> Article XII, IWT

<sup>171</sup> Baglihar Hydroelectric Plant, Expert Determination, (Feb. 12, 2007)

<sup>172</sup> Waseem Ahmad Qureshi, 'Political Dimension of Water Paucity in Pakistan' (2018) 19 Fla Coastal L Rev 1

<sup>173</sup> Ibid

<sup>174</sup> Ibid

<sup>175</sup> Baglihar Hydroelectric Plant, Expert Determination, at 4 (Feb. 12, 2007),

<http://siteresources.worldbank.org/SOUTHASIAEXT/Resources/223546-1171996340255/BagliharSummary.pdf>

<sup>176</sup> Ibid

of the parties “should be read in the light of new technical norms and new standards as provided for by the Treaty.”<sup>177</sup> These new norms and standards considered under customary international law benefitted India. Pakistan’s objections were overruled and the Expert made minor changes to India’s plans to bring them in accordance with the treaty.<sup>178</sup>

### 5.3.3.2 Kishenganga Hydro-Electric Plant

Pakistan contested India’s proposed plans to build a hydro-electric plant on the Kishenganga tributary of the Jhelum River in Jammu and Kashmir.<sup>179</sup> These plans involved diverting the water through a power station and then returning it to a lower tributary of the Jhelum River. Pakistan protested on the basis that it had planned its own hydroelectric power plant on the Neelum tributary of the Jhelum River and India’s plans would affect its power-generating capacity.<sup>180</sup> It estimated that the Kishenganga project would reduce the water flow by 61 percent in the western Neelum River, reducing power production by 30 percent and costing Pakistan’s economy over 135 million USD annually.<sup>181</sup> After bilateral negotiations failed, Pakistan sought arbitration in May 2010 claiming the diversion violated its obligation to ‘let flow’ the waters.<sup>182</sup>

The Partial Award granted India permission to proceed in constructing the power plant provided it did not permanently alter the full flow of the river to its natural channel.<sup>183</sup> Paragraph 15(iii) of the IWT’s Annexure D held that Pakistan’s existing uses were to be taken into account as a guiding principle. The tribunal also held that it was incumbent upon it to interpret and apply the Treaty in light of the customary international principles for the protection of the environment in force today.<sup>184</sup> As a result, it held that customary international law, including principles of international environmental law, prevented India from diverting the waters and so India was to construct and operate the power plant in a way which enabled the minimum flow to be maintained.<sup>185</sup> The rate of flow was to be determined at the Final Award. Pakistan argued in favour of a dynamic assessment whereas India preferred a temporally static approach to the treaty.<sup>186</sup>

The Final Award obliged India to mitigate the adverse effects to Pakistan’s agricultural and hydro-electric uses but also preserved India’s right to operate the power plant and maintain its right of priority.<sup>187</sup> This right was because the Kishenganga power plant predated the Neelum-Jhelum power plant. The final rate

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<sup>177</sup> Ibid

<sup>178</sup> Rao (supra n.129)

<sup>179</sup> See In the Matter of the Indus Waters Kishenganga Arbitration, (*Pakistan v. India*), Partial Award (Arb. Trib. Feb. 18, 2013)

<sup>180</sup> Waseem Ahmad Qureshi, 'Political Dimension of Water Paucity in Pakistan' (2018) 19 Fla Coastal L Rev 1

<sup>181</sup> Ibid

<sup>182</sup> Ibid

<sup>183</sup> In the Matter of the Indus Waters Kishenganga Arbitration, (*Pakistan v. India*), Partial Award (Arb. Trib. Feb. 18, 2013)

<sup>184</sup> Ibid and see Rossi (supra n.128)

<sup>185</sup> Ibid

<sup>186</sup> Rossi (supra n.128)

<sup>187</sup> Indus Waters Kishenganga Arbitration (*Pak v. India*), PCA Case Repository, Final Award, (Perm. Ct. Arb. 2013)

of minimum flow was fixed at 9 cumecs.<sup>188</sup> The tribunal again emphasised customary international law requirements of avoiding or mitigating trans-boundary harm and promoting sustainable development. However, it also circumscribed this approach by stating that the treaty “expressly limits the extent to which the Court may have recourse to, and apply, sources of law beyond the Treaty itself”.<sup>189</sup> The tribunal also stated that if “customary international law were applied not to circumscribe, but to negate rights expressly granted in the Treaty, this would no longer be ‘interpretation or application’ of the Treaty but the substitution of customary law in place of the Treaty.”<sup>190</sup> It also held that India is to share the designs and plans of all construction works on the western rivers with Pakistan at least six months before starting them.<sup>191</sup>

#### *5.3.4 Issues the Parties have with the Treaty*

The IWT has come under strain as the cooperation between the two countries over water management is increasingly fraught. The way the two countries observe the treaty is also very different; India proceeds with its plans unilaterally whereas Pakistan monitors these carefully in an attempt to protect its share of the resource while initiating disputes under the treaty.<sup>192</sup> Both countries are building dams and hydro-electric power plants on the Indus and despite the IWT requiring both countries to share data with regards to inflows, outflows and projects, they use outdated techniques and the data shared is often vague and incomplete.<sup>193</sup> The contentions of both countries will be discussed in this section.

#### **Pakistan**

Pakistan claims that India has violated the treaty by altering the volume of water flow by storing the water and exceeding the limits placed on storage facilities, particularly through its construction of the Kishenganga and Baglihar dams.<sup>194</sup> These construction projects on its waters, Pakistan claims, is India stealing water by increasing its own water management capacity over the western rivers. Pakistan has protested against India’s construction for hydroelectric power generation arguing that their effects will add up downstream.<sup>195</sup> This has caused water shortages in Sindh. The Kishenganga project itself is predicted to decrease Pakistan's water supply by 8-9 percent.<sup>196</sup> When India is not bottling up the water, Pakistan argues that it weaponises it by releasing torrents without notice which causes flooding.<sup>197</sup> There are fears that India could withhold water from Pakistan as a political tool. The desire to do so will be exacerbated by climate change and its need to fulfil the water needs of its own population.

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<sup>188</sup> Ibid Para 109

<sup>189</sup> Ibid Para 111

<sup>190</sup> Ibid Para 112

<sup>191</sup> Waseem Ahmad Qureshi, 'Dispute Resolution Mechanisms: An Analysis of the Indus Waters Treaty' (2018) 18 Pepp Disp Resol LJ 75

<sup>192</sup> Ibid

<sup>193</sup> Ibid

<sup>194</sup> Ibid

<sup>195</sup> Rossi (supra n.128)

<sup>196</sup> Waseem Ahmad Qureshi, 'Combating Climate Change in the Indus River Basin' (2017) 10 Ky J Equine Agric & Nat Resources L 1

<sup>197</sup> Rossi (supra n.128)

## India

India contends that the construction of dams and hydro-electric power plants are required to meet its growing electricity demands and the treaty should be amended to cater to the needs of the upper riparian state.<sup>198</sup> It further states that climate change has changed the amount of water flow.<sup>199</sup> In 2016, during political tensions between both countries, Indian Prime Minister Modi suspended India's participation in joint meetings to manage the river.<sup>200</sup> Modi in a speech in 2019 stated that "For the last 70 years, the waters that belonged to India ... were going to Pakistan... [the Prime Minister promised to] stop it and bring it to [Indian] households."<sup>201</sup> The BJP has also now threatened to scrap the IWT altogether and capture all unutilised water flowing to Pakistan.<sup>202</sup> India argues that this will not violate the IWT premising its argument on the controversial and much-discredited Harmon Doctrine under which the upper riparian state is granted absolute rights over water flowing in its territory.<sup>203</sup>

## Jammu and Kashmir

In 2003, Jammu and Kashmir's Legislative Assembly passed a resolution to review the treaty with the aim of terminating it.<sup>204</sup> Pakistan has long believed that India weaponises the IWT to win the support of 'energy-deficient Kashmiris' and to drive a wedge between Kashmiris and Pakistanis.<sup>205</sup> Pakistan has countered Indian rhetoric by stating that it is ready to go to war to defend its water rights.<sup>206</sup> In September 2016, in response to talk from India regarding the treaty no longer serving India's interests, Pakistani officials stated that its abrogation would be considered an act of war.<sup>207</sup> Pakistan's Senate has also recently passed a resolution to review the treaty in order to attempt to claim more water for Pakistan.<sup>208</sup> Jammu and Kashmir where all of the sources of Pakistan's water flow, is its Achilles Heel and this has been noted by senior diplomats who have said that "The dispute over Kashmir and the distribution of the Indus waters are inseparable."<sup>209</sup>

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<sup>198</sup> Waseem Ahmad Qureshi, 'Political Dimension of Water Paucity in Pakistan' (2018) 19 Fla Coastal L Rev 1

<sup>199</sup> Ibid

<sup>200</sup> Joshua Busby, 'Warming World: Why Climate Change Matters More than Anything Else' (2018) 97 Foreign Aff 49

<sup>201</sup> Prabhask K. Dutta, *PM Modi's Water Threat to Pakistan: What India Can Do Under Indus Waters Treaty*, India Today (Oct. 16, 2019), <https://www.indiatoday.in/india/story/pm-modi-s-water-threat-to-pakistan-what-india-can-do-under-indus-waters-treaty-1609883-2019-10-16>

<sup>202</sup> Rossi (supra n.128)

<sup>203</sup> Ibid

<sup>204</sup> Ibid

<sup>205</sup> Ibid

<sup>206</sup> Waseem Ahmad Qureshi, 'Combating Climate Change in the Indus River Basin' (2017) 10 Ky J Equine Agric & Nat Resources L 1

<sup>207</sup> Erum Sattar and Jason Robison and Daniel McCool, 'Evolution of Water Institutions in the Indus River Basin: Reflections from the Law on the Colorado River' (2018) 51 U Mich JL Reform 715

<sup>208</sup> Senate Resolves to Review Indus Water Treaty, THE NEWS INT'L (Mar. 8, 2016), <http://www.thenews.com.pk/print/103709-Senate-resolves-to-reviewIndus-Water-Treaty>

<sup>209</sup> Inst. Of Strategic Studies Islamabad, Report Seminar: Indus Water Treaty: Issues And Recommendations 6 (Aug. 29, 2017), <http://issi.org.pk/report-seminar-on-indus-water-treaty-issues-and-recommendations/>

### 5.3.5 Weaknesses of the Treaty

The agreement has been criticised for being ill-suited to deal with climate change which will affect the flow of the rivers. This is because it divides the rivers without taking into account the volume of water involved and does not provide for joint management.<sup>210</sup> It also allows India and Pakistan to manage ‘their’ rivers as the only sovereigns given its river-dividing rather than benefit-sharing approach which promotes tolerance rather than cooperation.<sup>211</sup> Maqbool argues that “while it is a fortunate reality that the two countries have not gone to war on the issue of water sharing, using this as a metric to declare the Treaty a success seems to be setting an upsettingly low bar for the peace of the subcontinent.”<sup>212</sup>

However, all blame cannot be laid at the feet of the IWT as addressing the threat of climate change would require a great deal more cooperation than India and Pakistan seem capable of.<sup>213</sup> It seems that increasing water scarcity will exacerbate hydropolitical tensions to such a degree that they will not be manageable by the dispute resolution provisions of the treaty. If either country were to take unilateral action in defiance of the agreement, it would bring both of them closer to water-aggravated war.

## 5.4 Applying International Law to Pakistan-India Water Relations

This section will consider the rules and norms under international law which would apply to Pakistan and India’s water relations in the event that any unilateral steps were taken. The unilateral steps envisaged will focus on those taken by India given it has greater latitude to alter the status quo as the upper riparian State.

### 5.4.1 International Law of Climate Change and Customary International Environmental Law

Both India and Pakistan have signed and ratified the Paris Agreement and have set their own nationally determined contributions under the convention. Under Article 8 of the Agreement, State parties are to recognise the importance of averting, minimising and addressing loss and damage associated with the adverse effects of climate change, including extreme weather events and slow onset events. However, this provision, which was seen as an important feature of climate justice, does not provide a basis for liability or compensation.<sup>214</sup> Therefore, Pakistan could argue that any unilateral acts by India in diverting water or other construction would incur loss and damage to it, however, it cannot claim compensation or hold

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<sup>210</sup> Uttam Kumar Sinha, Arvind Gupta & Ashok Behuria (2012) Will the Indus Water Treaty Survive?, *Strategic Analysis*, 36:5, 735-752, DOI: 10.1080/09700161.2012.712376

<sup>211</sup> Glen Hearn and Richard Kyle Paisley, 'Lawyers Write Treaties, Engineers Build Dikes, Gods of Weather Ignore Both: Making Transboundary Waters Agreements Relevant, Flexible, and Resilient in a Time of Global Climate Change' (2013) 6 *Golden Gate U Env'tl LJ* 259

<sup>212</sup> Alizeh Maqbool, *The Indus Waters Treaty: Pakistan's Case for a Revision Environmental Policy and Law*, Vol. 47, Issue 2 (2017), pp. 78-88

<sup>213</sup> Rao (supra n.128)

<sup>214</sup> See Kirsten Davies and Thomas Riddell, 'The Warming War: How Climate Change Is Creating Threats to International Peace and Security' (2017) 30 *Geo Int'l Env'tl L Rev* 47

India responsible under the treaty. The best recourse for Pakistan therefore remains the law on state responsibility under which damages could be claimed for a breach of treaty.

Pakistan can also hold India liable under the ‘no harm’ principle as established in the *Trail Smelter*<sup>215</sup> and *Corfu Channel* cases.<sup>216</sup> This principle could be applied in this context as Pakistan could readily argue that any diversion of water would cause harm to persons and properties located in its territory and that India is acting in violation of its obligation to ensure that activities within its jurisdiction respects the environment beyond its national control. Moreover, any unilateral diversion without a modification or negotiation under the Indus Waters Treaty would violate the principle of cooperation. Constructions in the forms of dams or hydroelectric plants which would result in environmental degradation in Pakistan would also violate the precautionary principle and the principle of sustainable development.

#### 5.4.2 *International Law on the Use of Force*

As noted above, the use of force is prohibited in international law unless it is undertaken in self-defence or as part of a collective security operation. The diversion of water or India’s breach of the Indus Waters Treaty may be taken by Pakistan to the Security Council, however, given the presence of the United States as permanent member, it is unlikely that this will bear any fruit. Furthermore, as the law currently stands, there is no recourse to self-defence under international law for a breach of treaty or for water diversion. The parameters for the use of self-defence under Article 51 of the UN Charter are rather strict; they require that an armed attack have occurred against a State. Breach or termination of a treaty does not authorise the use of force as is illustrated by Article 2(3) of the UN Charter which states that all members are to settle their international disputes peacefully. Whilst the ‘material breach’ argument was used by the US and the UK to justify military action in Iraq in 2003, in that they argued that Iraq breached its disarmament obligations under Security Council Resolution 687, this was controversial and many view the use of force in Iraq as an illegal war.<sup>217</sup> Therefore, any relaxation of these conditions, or of a new exception for atmospheric interventions against climate rogue states, require State practice and opinio juris on the part of States to form a new custom. This has not yet happened.

However, States may increasingly see environmental actions as uses of force. For instance, Martin points out that the narrative may be moving in this direction, perhaps politically at first, stating that “The Economist cover story in the first week of August 2019 characterized Brazil’s deforestation efforts in the Amazon as a threat to neighboring countries and to humanity more generally—it even analogized Brazil’s conduct to “an act of war.” An essay in Foreign Policy made a move in the same direction, raising the question of whether states had the right— or even the obligation—to consider using force to protect the Amazon. That same week, a feature in The Guardian appeared under the title “Australia’s Climate Stance is Inflicting Criminal Damage on Humanity.””<sup>218</sup> Whether international law does move in this direction is yet to be seen.

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<sup>215</sup> Trail Smelter Arbitration (*United States v. Canada*), 3 U.N. Rep. Int’l Arb. Awards 1905 (1941)

<sup>216</sup> Corfu Channel (*U.K. v. Albania*), 1949 I.C.J. 4 (Apr. 9)

<sup>217</sup> See E-International Relations, ‘Material Breach’: A Valid Justification for Military Intervention in Iraq?, August 21, 2014, <https://www.e-ir.info/2014/08/21/material-breach-a-valid-justification-for-military-intervention-in-iraq/>

<sup>218</sup> Martin (supra n.6)

### 5.4.3 International Law of State Responsibility

However, it is important to note that the inapplicability of self-defence under the jus ad bellum notwithstanding, Pakistan would retain the right to use self-defence as a circumstance precluding wrongfulness under Article 21 of the ILC Articles on State Responsibility.<sup>219</sup> Circumstances precluding wrongfulness allow for States to justify breaches of international law. This means that Pakistan would be able to depart from other international obligations, such as under the IWT, in response to India's breach. This interpretation was upheld in *Oil Platforms* where the ICJ understood that if the US could prove it was acting in self-defence, it would not be responsible for breaching the Amity Treaty between itself and Iran.<sup>220</sup> These obligations however cannot include some non-derogable human rights norms or obligations under the rules of international humanitarian law.<sup>221</sup> Pakistan could also invoke Article 60 of the Vienna Convention on the Law of Treaties under which a material breach of a treaty can be invoked by a party as a ground for terminating or suspending the treaty.<sup>222</sup> Pakistan could argue that a diversion of water constitutes a material breach of the Indus Waters Treaty as it goes against its object and purpose.

Furthermore, Pakistan could also contend that it was compelled for reasons of necessity to breach its international obligations under Article 25. Necessity precludes wrongfulness where an essential interest is threatened by a grave and imminent peril and the only way to safeguard it is by not respecting an obligation protecting an interest of a lesser value. The ICJ held in the *Gabčíkovo-Nagymaros* case that environmental interests are essential interests of a State.<sup>223</sup>

Lastly, Pakistan may also take countermeasures under Article 22 and Articles 49-53 of the ILC Articles as a form of self-help against India's wrongful act in breach of the treaty. This would be undertaken in order to "restore the legal relationship with the responsible State which has been ruptured by the internationally wrongful act" and to secure India's compliance with the treaty.<sup>224</sup> Pakistan would have to ensure that the countermeasure undertaken is necessary and proportionate to the injury suffered and it cannot use force under this provision. Examples of countermeasures undertaken by States include legislation prohibiting the export of goods to, and import of goods from, the wrongdoing country, the suspension of some treaties with the State, economic boycotts, flight bans, and the freezing of assets.<sup>225</sup>

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<sup>219</sup> ILC Draft Articles on Responsibility of States for Internationally Wrongful Acts, with commentaries (2001), General Assembly Official Records 56th session, supplement no 10 (A/56/10)

<sup>220</sup> *Oil Platforms (Islamic Republic of Iran v United States of America)*, Preliminary Objections, Judgment, ICJ Reports 1996, p 803 and ARSIWA Commentary to Article 21, para 2

<sup>221</sup> *Legality of the Threat or Use of Nuclear Weapons*, Advisory Opinion, 1996 I.C.J. 226 (July 8)

<sup>222</sup> United Nations, Vienna Convention on the Law of Treaties, 23 May 1969, United Nations, Treaty Series, vol. 1155, p. 331

<sup>223</sup> *Case Concerning the Gabčíkovo-Nagymaros Project (Hungary/Slovakia)* [1997] ICJ Rep 7, 44–46 (paras 55-57) (hereafter *Gabčíkovo-Nagymaros*)

<sup>224</sup> ARSIWA Commentary Article 22

<sup>225</sup> See ILC Commentary on Countermeasures, Article 49

#### *5.4.4 International Water Law*

Neither India nor Pakistan are party to the UN Watercourses Convention, however, the customary principles of international water law would apply to any dispute. As a result, if India diverts the water in breach of the Indus Waters treaty, it would be violating the principle of equitable and reasonable utilisation and the no significant harm principle. This would be because as fellow riparian States, India would have unreasonably deprived Pakistan from its equitable share of the river. Furthermore, it would also have caused significant harm, given how dependent Pakistan is, in terms of agriculture as well as energy production, on the river.

### **5.5 Recourse for Pakistan**

Pakistan should anticipate volatile water-relations between India and itself in the future which may lead to unilateral action by India. This is based not only on the BJP's rhetoric regarding scrapping the Indus Waters Treaty entirely but also on the impact that climate change will have on the parties' obligations under the agreement. This paper suggest the following recourse for Pakistan:

- In expectation of rising hydropolitical tensions, Pakistan should begin negotiations under the treaty with the World Bank for a climate change annexure. It should do so with the aim of ensuring its water needs are met taking into account the customary international environmental law principles mentioned in this paper which have developed after 1960.
- Pakistan should further push for a modification in the treaty which provides for time limitations for any disputes arising under the treaty. This is because India has continued with construction works while issues were being adjudicated by the Neutral Expert or Arbitral Tribunal. This will ensure that India cannot fall back on a fait accompli argument should the dispute resolution body declare its construction to be illegal.
- In the event of a breach of treaty or unilateral action being undertaken by India in violation of the treaty, Pakistan should prepare its response under the law of state responsibility outlined above. Namely, it should be decided what breaches Pakistan should undertake in response and whether it will adopt countermeasures against India and what form these will take.
- Pakistan should, in light of the previous point, liaise with China which is an upper riparian State to India in deciding what action could be taken against India in the event that it were to divert water from Pakistan or stop the flow entirely.

## 6. Conclusion

Pakistan and India are acutely vulnerable to climate change and water scarcity poses an existential threat to both nations. However, due to deep mistrust between the parties and the rise of hydro-political tensions owing to India's hawkish statements, it is unlikely that they will be able to cooperate in the future to share this resource. This is unfortunate as the lives of millions depend on the Indus river for sustenance but it is also incredibly concerning for Pakistan which is at a disadvantaged position of being the lower riparian State. As a result, in order to protect its own population, and avoid water-aggravated war, Pakistan must adopt a forward looking approach in countering any unilateral acts by India. The international legal framework does offer recourse to Pakistan in the event of a breach of treaty. In order to avoid inter-state confrontation, Pakistan must assess and consider its legal choices prior to any such unilateral act - for instance, by analysing its options in amending the Indus Waters Treaty as well as its response under the law of state responsibility. Given India is able to strangle it economically and water demands will only increase, Pakistan's best plan of action at this stage is to be prepared. This preparation may be necessary for its survival.