# Climate Change and Armed Conflict: Challenges and Opportunities for Maintaining International Peace and Security Through Climate Justice

*Onita Das**



** I would like to thank Christine Castro, Esq. and Divya Pillai, Esq. for their invaluable research assistance. Special thanks also goes to Dr. Ben Pontin and Elena Blanco for their review and comments and to Prof. Randall Abate for his excellent comments and edits on this chapter.*

## Introduction

> *Climate change is real; it is accelerating in a dangerous manner; and it not only exacerbates threats to international peace and security, it is a threat to international peace and security.*
>
> – United Nations Secretary General Ban Ki Moon[1]

Climate change is a global phenomenon. As the United Nations Intergovernmental Panel on Climate Change (IPCC) stated almost a decade ago, "warming of the climate system is unequivocal, as is now evident from observations of increases in global average air and ocean temperatures, wide-spread melting of snow and ice and rising global average sea level."[2] In addition, scientists have determined that such anthropogenic climate change can directly cause changes to the environment, which, in turn, may then indirectly affect human beings in the long term.[3]

This chapter argues that under certain circumstances, particularly where human adaptation to the changing climate is ineffective, climate change impacts can spark armed conflicts[4] that, in turn, negatively affect the environment and the population, thereby leading to a new cycle of destruction that engages the issues of climate justice. In these circumstances, the affected population has to adapt to the situation, or in some cases leave for a more habitable environment. Such migration or direct negative effects of climate change on the environment could trigger conflict within and with other communities as people compete for dwindling resources. For example, the United Nations Environment Programme (UNEP) highlighted the causal link between climate change and armed conflict in its 2007 report, "Sudan: Post-conflict Environmental Assessment."[5] More recently, the issue of climate change contributing to conflict has been raised in relation to the conflict in Syria.[6]

1. United Nations Secretary General Ban Ki Moon, Remarks to the Security Council on the Impact of Climate Change on International Peace and Security (July 20, 2011), http://www.un.org/sg/STATEMENTS/index.asp?nid=5424.
2. S. Solomon et al., Climate Change 2007: Impacts, Adaptation, and Vulnerability. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change (2007), https://www.ipcc.ch/publications_and_data/ar4/wg1/en/spmsspm-direct-observations.html.
3. *See generally* Climate Change 2014: Impacts, Adaptations, and Vulnerability, Part A: Global and Sectoral Aspects (IPCC 2014); David Cohen, *Climate Change Could Kill 500,000 a Year by 2030*, New Scientist, May 29, 2009, http://www.newscientist.com/article/dn17218-climate-change-could-kill-500000-a-year-by-2030.html.
4. The terms "armed conflict" and "conflict" will be used interchangeably throughout the chapter.
5. UNEP, Sudan: Post-Conflict Environmental Assessment 8 (2007).
6. Colin P. Kelley et al., *Climate Change in the Fertile Crescent and Implications of the Recent Syrian Drought*, 112 Proc. Nat'l Acad. Sci. 3241 (2015).

While climate change regulation exists under mechanisms such as the United Nations Framework Convention on Climate Change (UNFCCC), such regulation primarily focuses on mitigating global greenhouse gases (GHGs). Though mitigating and combating emissions are important, such regulation may not be able to effectively address wider, more pervasive challenges resulting from climate change. Beyond regulating the primary sources of climate change, climate change adaptation is equally important and, as such, a climate justice approach to meeting adaptation issues is key. Climate justice—a concept built on the platform of equitable development, human rights, and environmental justice—focuses on the unequal burden of climate change impacts on the most vulnerable and seeks to safeguard their rights, particularly by promoting more equitable and fair allocation of such burdens at the local, national, and international levels.

Using the examples of the conflicts in Darfur and Syria, this chapter explores applying the concept of climate justice together with the existing climate change legal framework to more effectively meet the challenges created by climate change-related armed conflict issues. Part I of this chapter examines the nexus between climate change and armed conflict. Part II considers the challenges of climate change-related armed conflict and the limitations of existing climate change regulation. Part III proposes approaching climate change-related armed conflict through a climate justice lens.

## I. Climate Change and Armed Conflict

A 2014 IPCC report confirms that climate change threatens to disrupt weather patterns and ecosystems.[7] This includes "very likely" predictions of extreme hot and cold weather (e.g., heat waves, droughts, floods, cyclones, and wildfires),[8] unpredictable weather, and global rising sea levels.[9] Observed evidence of the impact of such climate changes globally extend from alteration of hydrological systems, which impacts water resources; ocean acidification, which threatens global marine life; increasing desertification, which reduces arable and habitable land; and disruption of global crop cycles.[10] As a

7. Climate Change 2014: Impacts, Adaptations, and Vulnerability, Part A: Global and Sectoral Aspects, *supra* note 3, at 10.
8. *Id.* at 8.
9. Owen Alterman, *Climate Change and Security: An Israeli Perspective*, 18 Strategic Assessment 117, 118 (2015) (citing Climate Change 2014: Impacts, Adaptations, and Vulnerability, Part A: Global and Sectoral Aspects, *supra* note 3, at 10).
10. Climate Change 2014: Impacts, Adaptations, and Vulnerability, Part A: Global and Sectoral Aspects, *supra* note 3, at 6. *See also* United Nations Convention to Combat Desertification, Climate Change and Desertification, Thematic Fact Sheet Series No. 1 (2007), http://www.unccd.int/Lists/SiteDocumentLibrary/Publications/Desertificationandclimatechange.pdf.

result, climate change is also projected to threaten food security.[11] Thus, this chapter focuses on whether and to what degree climate change is a threat to international peace and security.

## *A. The Nexus Between Climate Change and Armed Conflict*

Climate change can be linked to armed conflict in a variety of ways. Not only will climate change threaten resource allocation, food and water security, and coastal societies, such threats will have significant implications on global stability—particularly for poor or fragile nations that lack good governance in institutions, resources, and the resilience required to adapt and respond to climate change impacts.[12] Moreover, as these adverse consequences accelerate, these stresses could in turn increase forced human migrations, raise tensions, and trigger or exacerbate conflict.[13] A causal link between climate change and armed conflict (in the context of Sudan) is explained by the 2007 UNEP report as follows: "complex but clear linkages exist between environmental problems and the ongoing conflict. Indeed, climate change, land degradation and the resulting competition over scarce natural resources are among the root causes as well as the consequences of the violence and grave humanitarian situation in the region."[14] However, in reality the link between climate change, environmental degradation, and armed conflict is more complicated.

Many factors condition the likelihood of violent conflict ensuing from change in climatic conditions. The extent to which factors like migration; inadequate responses to climate change pressures; and social, economic, and political instability increase the possibility of violent conflict "depends crucially on country-specific and contextual figures."[15] As Halvard Buhaug and

11. Climate Change 2014: Impacts, Adaptations, and Vulnerability, Part A: Global and Sectoral Aspects, *supra* note 3, at 13.
12. *See, e.g.*, Oli Brown, Anne Hammill & Robert McLeman, *Climate Change as the "New" Security Threat: Implications for Africa*, Int'l Aff. 83, 1141 (2007); Michael Werz & Laura Conley, *Climate Change, Migration, and Conflict: Addressing Complex Crises Scenarios in the 21st Century*, Center for Am. Progress 1 (2012), https://cdn.americanprogress.org/wpcontent/uploads/issues/2012/01/pdf/climate_migration.pdf; Solomon M. Hsiang et al., *Quantifying the Influence of Climate on Human Conflict,* Sci. 341 (2013); Ashok Swain, Understanding Emerging Security Challenges: Threats and Opportunities 28 (2013).
13. Brown et al., *supra* note 12, at 1141. *See also* Werz & Conley, *supra* note 12, at 20; Hsiang et al., *supra* note 12.
14. UNEP, *supra* note 5, at 22.
15. Halvard Buhaug, Nils Petter Gleditsch & Ole Magnus Theisen, Social Dimensions of Climate Change: Implications of Climate Change for Armed Conflict, World Bank Social Development Department 2 (2008). *But cf.* Halvard Buhaug et al., *One Effect to Rule Them All? A Comment on Climate and Conflict*, 127 Climate Change 396 (2014) (acknowledging that this commentary on climate change-conflict research "should not be taken to imply that climate has no

Ida Rudolfsen note, "[c]ountries characterized by chronic political instability, large and heterogeneous populations, widespread poverty and inequality, and high dependence on rain-fed agriculture are much more likely to elicit any of the adverse social effects" that may exacerbate conflict.[16] The adverse consequences of climate change will not cause conflict in all situations, nor will it be the sole cause of armed conflict. It is the adverse impacts of climate change coalescing with existing divisions within society—whether political, economic, or social in nature—that could lead to or exacerbate violent conflict.

Research on the causal link between climate change and armed conflict to date is controversial and contradictory. For example, Nils Petter Gleditsch finds that at present there is not much evidence that climate change is an important driver of conflict.[17] Buhaug and Rudolfsen argue that while climate change is unlikely to have a uniform and universal effect on the risk of armed conflict, climate change may indirectly impact conflict through human migration, economic shocks, or food insecurity.[18] They also note that "many of the factors that drive armed conflict today also determines societies' vulnerability to climate change . . . ."[19] In contrast, Solomon M. Hsiang et al. conclude, having carried out a comprehensive review of climate-human conflict literature (60 previous studies), "that there is more agreement across studies regarding influence of climate on human conflict than has been recognized previously."[20] Hsiang et al. argue that a warming of global temperature from 2–4°C could amplify human conflict, but conclude that climate variability is not the sole or primary driver of conflict.[21] Therefore, climate change pressures are one of many variable factors that may trigger or

influence on armed conflict" but rather that "research to date has failed to converge on a specific and direct association between climate and violent conflict").

16. Halvard Buhaug & Ida Rudolfsen, A Climate of Conflicts? Conflict Trends 05 of the Peace Research Institute of Oslo (2015), http://file.prio.no/publication_files/prio/Buhaug,%20Rudolfsen%20-%20A%20Climate%20of%20Conflicts,%20Conflict%20Trends%2005-2015.pdf.
17. Nils Petter Gleditsch, *Whither the Weather? Climate Change and Conflict*, 49 J. Peace Res. 3, 5 (2012). *See also* Dan Smith & Janani Vivekananda, *Climate Change, Conflict, and Fragility: Getting the Institutions Right*, *in* Climate Change, Human Security, and Violent Conflict: Challenges for Societal Stability 78 (Jürgen Scheffran et al. eds., 2012) (arguing that the climate change-conflict link is unsubstantiated by empirical evidence, but that "this lack of empirical evidence to date does not mean that there is no link between climate change and security").
18. Buhaug & Rudolfsen, *supra* note 16.
19. *Id.*
20. Hsiang et al., *supra* note 12. This research has been criticized by the scientific community for not being comprehensive enough. *See* World Bank, 4° Turn Down the Heat: Confronting the New Climate Normal 145 (2014), http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2014/11/20/000406484_20141120090713/Rendered/PDF/927040v20WP00O0ull0Report000English.pdf.
21. Hsiang et al., *supra* note 12, at 1, 12.

exacerbate a potential conflict situation because such pressures will not cause elevated conflict risk in all societies.[22]

Numerous scholars and analysts agree that while climate change will not be a direct driver of conflict, it is considered a "threat multiplier," i.e., it is one factor that reinforces or exacerbates existing environmental, political, or socioeconomic tensions or vulnerabilities that present challenges to peace and security.[23] The negative effects of climate change will thus have serious implications for international peace and security, as not all nation States will be able to adapt to the unpredictable and changing climate conditions. Although many see climate change as a potential future threat with respect to armed conflict, some argue that in reality it has already had an impact.[24] The climate change-conflict link is explored in the following case studies.

## *B. The Climate Change and Armed Conflict Nexus in Darfur and Syria*

The climate change-conflict nexus is better understood by reviewing conflicts in practice. The case studies not only extend a descriptive view of the subject area, but also offer a reflection on human experience in such situations, thereby providing an important basis for ascertaining the appropriate action required. This section examines the link between climate change impacts and armed conflict by first exploring the 2003 Darfurian conflict and subsequently the most recent conflict in Syria.

The conflict in Darfur was caused by various factors. Despite its status as the largest region in the west of Sudan, Darfur is geographically isolated, which has caused it to be virtually ignored by the central Sudanese government in Khartoum.[25] Amidst a background of political marginalization and rising demographic pressure, the Darfur conflict was initiated by natural ecological adversity, which was exacerbated by serious government misman-

22. *See also* Onita Das, Environmental Protection, Security, and Armed Conflict: A Sustainable Development Perspective 71 (2013) (arguing that climate change could add to the scarcity of natural resources, which could cause conflict in some situations).

23. *See, e.g.*, Stephen Marr, *Contextualizing Conflict: Trends and Challenges in the Syrian Civil War*, *in* International Organizations and the Implementation of the Responsibility to Protect: The Humanitarian Crisis in Syria 49 (Daniel Silander & Don Wallace eds., 2015); Swain, *supra* note 12, at 28; Christina Voigt, *Security in a "Warming World": Competences of the UN Security Council for Preventing Dangerous Climate Change*, *in* Security: A Multidisciplinary Normative Approach 294 (Cecilia M. Bailliet ed., 2009).

24. *See, e.g.*, Hsiang et al., *supra* note 12; Shirley V. Scott, *Climate Change and Peak Oil as Threats to International Peace and Security: Is it Time for the Security Council to Legislate?*, 9 Melb. J. Int'l L. 495, 504 (2008).

25. Leilani F. Battiste, *The Case for Intervention in the Humanitarian Crisis in Sudan*, 11 Ann. Surv. Int'l & Comp. L. 49, 51 (2005).

agement of natural resources such as land and water.[26] In northern Darfur, rain has decreased by a third over the past 80 years[27] and it has been suggested that the declining rainfall is attributed to some degree to global warming.[28] As the United Nations Secretary-General, Ban Ki-Moon, comments:

> Almost invariably, we discuss Darfur in a convenient military and political shorthand—an ethnic conflict pitting Arab militias against black rebels and farmers. Look to its roots, though, and you discover a more complex dynamic. Amid the diverse social and political causes, the Darfur conflict began as an ecological crisis, arising at least in part from climate change.[29]

Violence in Darfur erupted during the drought as a result of a combination of these factors. Once the rain stopped, there was no longer enough food and water for the population. Thus, fighting and conflict broke out when local groups rebelled, triggering counter attacks by the Khartoum-controlled Sudanese central army and government-backed Arab militia, the Janjaweed. By 2003, this spiralled into the tragedy that is evident today, in which nearly four years of armed conflict killed approximately 300,000 people and displaced more than five million.[30]

The 2007 UNEP report suggests that climate change and environmental degradation had a part to play in the conflict in Darfur.[31] The report claimed a strong causal link between climate-induced land degradation, desertification, and violent conflict in Darfur.[32] In contrast, many studies have disputed that the Darfurian conflict was primarily caused by climate change and conclude that the violence was driven by multiple factors (e.g., legacy of violence, ethnic fragmentation, ineffective governance, limited public services, and economic development), which are difficult to isolate as being the most influential.[33] Although violence erupted during the drought primarily as a result of diverse political and social problems with a combination of food

26. UNEP, From Conflict to Peacebuilding: The Role of Natural Resources and the Environment 9 (2009) [hereinafter From Conflict to Peacebuilding].
27. UNEP, *supra* note 5, at 60.
28. Ban Ki Moon, *A Climate Culprit in Darfur*, Wash. Post, June 16, 2007, at A15, http://www.washingtonpost.com/wp-dyn/content/article/2007/06/15/AR2007061501857_pf.html; From Conflict to Peacebuilding, *supra* note 26, at 9.
29. *Id.*
30. From Conflict to Peacebuilding, *supra* note 26, at 9.
31. UNEP, *supra* note 5, at 22.
32. *Id.*
33. W. Neil Adger et al., *Human Security*, *in* Climate Change 2014: Impacts, Adaptation and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change 773 (C.B. Field et al. eds., 2011) (citing Lyal S. Sunga, *Does Climate Change Kill People in Darfur?*, 1 J. Hum. Rts. & Env't 64, 85 (2011); H. Verhoeven, *Climate Change, Conflict and Development in Sudan: Global Neo-Malthusian Narratives and Local Power Struggles*, 42 Dev. & Change 679 (2011)).

and water insecurity and a lack of arable land, tensions in Darfur were simmering just below the surface, years before the drought, over water, land, and grazing rights between the mostly nomadic Arabs and farmers from local African tribal communities.

Such divisions within society provided fertile ground for tensions and violence, as conflicts do not occur simply due to desertification and drought caused by climate variability.[34] Though this is true, there is no doubt that in this situation, ecological factors compounded by climate change, in this case, lack of arable land and drought, contributed to the aggravation of tensions and conflict.[35] The Darfur example illustrates a complex situation in which existing socioeconomic and political problems in a vulnerable society are exacerbated into a security and armed conflict situation by climate change impacts, which can occur in less adaptive communities. UNEP has observed that as climate change may lead to further water and land stresses in Darfur and the Sahel region, there is a "need to place adaptation at the centre of their development and conflict prevention plan."[36]

Almost a decade later, in another region, climate change once again is believed to have contributed to conflict. In March 2011, in a rural Syrian town, a peaceful protest against President al-Assad's regime escalated into violent conflict. In August 2015, the United Nations confirmed that the death toll was more than 250,000 since the start of the conflict and that 12 million residents had been displaced.[37] Scholars, politicians, and environmental activists have argued that climate change caused the conflict in Syria.[38] However, as noted in the climate change-conflict link discussion above, environmental reasons—or in this case climate change impacts—are never the sole cause of an outbreak of

34. From Conflict to Peacebuilding, *supra* note 26, at 9.
35. Linda Mbone Ndongo & Frank Maes, *Climate Change, Human Rights, and the Darfur Crisis*, *in* Biodiversity and Climate Change: Linkages at International, National, and Local Levels 140 (Frank Maes et al. eds., 2013).
36. From Conflict to Peacebuilding, *supra* note 26, at 9.
37. *Alarmed by Continuing Syria Crisis, Security Council Affirms Its Support for Special Envoy's Approach in Moving Political Solution Forward*, U.N. Security Council, 7504th mtg. (2015), http://www.un.org/press/en/2015/sc12008.doc.htm.
38. *See, e.g.*, Lucas Rüttinger et al., A New Climate for Peace: Taking Action on Climate and Fragility Risks, Woodrow Wilson International Center for Scholars 31, 32 (European Union Inst. for Security Stud. 2015); David King et al., Climate Change: A Risk Assessment 10 (Centre for Sci. & Pol'y 2015); President Obama, Remarks by the President at the United States Coast Guard Academy Commencement (May 20, 2015), https://www.whitehouse.gov/the-press-office/2015/05/20/remarks-president-united-states-coast-guard-academy-commencement); George Monbiot, *How Fossil Fuel Burning Nearly Wiped out Life on Earth—250M Years Ago*, The Guardian, May 27, 2015, https://www.theguardian.com/commentisfree/2015/may/27/threat-islamic-state-fossil-fuel-burning. *But cf.* Jan Selby & Mike Hulme, *Is Climate Change Really to Blame for Syria's Civil War?*, The Guardian, Nov. 29, 2015 (criticizing claims of climate change causing conflict in Syria), https://www.theguardian.com/commentisfree/2015/nov/29/climate-change-syria-civil-war-prince-charles.

conflict. The Syrian uprising was triggered by a series of socioeconomic, political, and environmental factors, including increasing poverty (caused in part by cancelled state subsidies and rapid economic liberalization), rising unemployment, lack of political freedom, corruption, a widening rural/urban divide, long-term mismanagement of natural resources, severe drought, and climate change impacts on crop production and water.[39]

Syria experiences a semi-arid climate common to the region, where bouts of droughts are not unexpected.[40] However, prior to the unrest, around winter 2006/2007, Syria and the greater Fertile Crescent experienced one of the worst three-year droughts recorded.[41] This drought spell was consistent with human-induced climate change.[42] The drought caused widespread crop failure, reduction of water availability per capita, and mass migration of agricultural-based families.[43] As Colin P. Kelley et al. argue, "[D]rought can lead to devastating consequences when coupled with preexisting acute vulnerability, caused by poor policies and unsustainable land use practices in Syria's case and perpetuated by the slow and ineffective response to the Assad regime."[44] As such, Kelley et al. conclude that "[t]here is evidence that the 2007–2010 drought contributed to the conflict in Syria."[45]

On the other hand, Francesca de Châtel cautions against an "exaggerated focus on climate change" as the trigger of Syria's humanitarian crisis, arguing that doing so shifts the burden of responsibility away from the long-term government mismanagement that devastated Syria's natural resources.[46] This view is consistent with the argument that climate change is never the sole cause but contributes to the toxic mix of existing socioeconomic and environmental vulnerabilities that can lead to a humanitarian crisis. Shahrzad Mohtadi concedes that while the drought that may be attributable to climate change did not independently cause the civil war, the combined adverse effects of climate change, from drought, resource depletion, mass migration, and the Assad regime's failure to address and mitigate the consequences, propelled the country into civil conflict.[47]

39. *See, e.g.*, Rüttinger et al., *supra* note 38, at 52; Francesca de Châtel, *The Role of Drought and Climate Change in the Syrian Uprising: Untangling the Triggers of the Revolution*, 4 Middle E. Stud. 521 (2014).
40. de Châtel, *supra* note 39, at 522, 523.
41. Kelley et al., *supra* note 6, at 3241.
42. *Id.*
43. *See, e.g.*, Caitlin E. Werrell et al., *Did We See It Coming?: State Fragility, Climate Vulnerability, and the Uprisings in Syria and Egypt*, 35 SAIS Rev. Int'l Aff. 44 (2015); Kelley et al., *supra* note 6, at 3242.
44. Kelley et al., *supra* note 6, at 3242 (internal citations omitted).
45. *Id.* at 3241.
46. de Châtel, *supra* note 39, at 524.
47. Shahrzad Mohtadi, Climate Change and the Syrian Uprising, Bull. Atomic Scientists (2012). *See also* Peter H. Gleick, *Water, Drought, Climate Change, and Conflict in Syria*, 6 Weather, Climate & Soc'y 338 (2015).

While there is some recognition that climate change had a part to play in the Syrian uprising, Syria's vulnerability to climate change in the period leading up to the conflict may have been underestimated. As such, further research on "how climate vulnerability interacts with state fragility" may be necessary, as a better understanding of such interaction may prove "critical for ensuring that governments and publics are better prepared for and able to mitigate destabilizing trends."[48]

In the context of both Darfur and Syria, while climate change was not the "straw that broke the camel's back" in terms of causing conflict, there is evidence that the unusual human-induced climatic changes, which increase climate vulnerability in some fragile societies, can contribute to conflict. Therefore, these examples demonstrate the requirement for a more holistic climate justice-oriented adaptation approach to prevent situations in which simmering tensions can overflow into conflict. In situations where a humanitarian crisis has already occurred, these case studies showcase the need for holistic mitigation and adaptation policies looking toward climate justice principles to mitigate further reoccurring threats to international peace and security.

## II. Climate Change-related Armed Conflict and the Limitations of Existing Climate Change Regulation

The Darfur and Syria case studies have demonstrated that in some circumstances, climate change can be considered a threat to international peace and security. Given that some nation States will not be able to adapt to the adverse consequences of unpredictable and changing climate conditions, climate change is a growing security concern for nation states worldwide.[49] Climate change as a threat multiplier requires effective adaptation. Part A of this section describes the adaptation challenges of climate change-related armed conflict and Part B reviews the adequacy of existing climate change regulation in addressing these challenges.

### *A. Challenges of Climate Change-related Armed Conflict*

The challenges of climate change related-conflict should be considered from two perspectives: first, the prevention of climate change-related conflict, which requires adaptation of vulnerable societies to the adverse consequences

48. Werrell et al., *supra* note 43, at 44.
49. Alterman, *supra* note 9, at 117.

of climate change; and second, in the event of climate change-related conflict, adaptation to further climate change impacts by the war-torn society to prevent a relapse into future climate change-related conflict.

Due to the absence of generally supported theories and evidence about the causal nexus between climate change and conflict, it is not possible to make concrete statements about the effects of climate change on armed conflict.[50] Nevertheless, according to Ashok Swain, "[w]hile the exact impact of climate change is not known, it is clear that it will not only affect access to shared but also overall availability of resources."[51] Therefore, climate change-related conflict could include conflicts over resources (as seen in Darfur) or environmental conditions that could be affected by extreme weather, such as flooding or drought, diminishing water and food security, increasing desertification, and reducing arable land.[52] As mentioned above, such conflicts may occur in weak or failing States that lack the capacity to adapt to such climatic changes. As Linda Mbone Ndongo and Frank Maes note in the context of Darfur, "[t]he consequences of climate change in these regions are worse because there is a lack of capacity to adapt."[53]

In the event of a climate change-related conflict, it is difficult to determine the exact impact of climate change on armed conflict. It is most likely that the challenges of climate change-related armed conflict would include all adverse effects of traditional armed conflict with the added layer of the complexity of climate change. The impact of armed conflict generally includes the death and injury of the human population; destruction of infrastructure and institutions; disruption of markets, education, and development of human capital; and environmental damage.[54] Such disruption as a result of armed conflict also further limits livelihoods and creates and increases poverty, which in turn gives rise to vulnerability to climate change impacts.[55] Population displacement or forced human migration is another resulting impact—migration due to the conflict as well as the inability to adapt to climate change, i.e., environmentally induced migration.[56] Such migration could also lead to future conflict. According to the UN Refugee Agency (UNHCR), "[s]uch moves, or the adverse effects that climate change may have on natural resources, may spark conflict with

50. Adger et al., *supra* note 33, at 773.
51. Swain, *supra* note 12, at 28.
52. *See, e.g.*, Voigt, *supra* note 23, at 293.
53. Ndongo & Maes, *supra* note 35, at 133.
54. Adger et al., *supra* note 33, at 774 (internal citations omitted).
55. *Id.*
56. United Nations, *Refugees—Next Steps: New Dynamics of Displacement*, http://www.un.org/en/globalissues/briefingpapers/refugees/nextsteps.html (last visited Aug. 22, 2016).

other communities, as an increasing number of people compete for a decreasing amount of resources."[57]

The problem today is that while a particular conflict may end, the issues caused by climate change may not. Therefore, rebuilding the society or State post-conflict includes being able to adapt to the challenges of climate change, and for a war-torn fragile society or State, this would be difficult to achieve. This is corroborated by W. Neil Adger et al., observing that "where violent conflict emerges and persists the capacity to adapt to climate change is reduced for affected populations."[58]

Thus, in meeting the challenges of climate change, adaptation is key. According to Oli Brown et al., "[i]n the context of climate change, adaptation takes place through adjustments to reduce vulnerability or enhance resilience to observed or expected changes in climate, and involves changes in processes, perceptions, practices and function.'[59] However, as the discussion above shows, the complexities and variable factors involved in a climate change-related conflict situation means that adaptation to such climate change-conflict challenges has to be dynamic—differing across regions, nations, and communities, taking into consideration the existing socioeconomic, political, cultural, and environmental vulnerabilities of each situation. The case studies above set out the possible situations in which climate change-related conflict may occur and underscore the complexity of the adaptation policies required. The question that arises next is whether existing climate change regulation is adequate in setting out a framework to meet such adaptation needs.

## *B. Existing Climate Change Regulation*

The primary international legislation for climate change is the 1992 UNFCCC, which has the ultimate objective of preventing "dangerous" anthropogenic interference with the climate system.[60] There is now a political commitment in the international community, as reflected in the 2015 Paris Agreement, that GHGs should be limited to ensure that global temperatures do not increase beyond 2°C.[61] In 2010, Parties to the UNFCCC recognized

57. United Nations High Commissioner for Refugees, *Climate Change and Disasters*, http://www.unhcr.org/pages/49e4a5096.html (last visited Aug. 22, 2016).
58. Adger et al., *supra* note 33, at 774.
59. Brown et al., *supra* note 12, at 1149.
60. UNFCCC, *First Steps to a Safer Future: Introducing the United Nations Framework Convention on Climate Change*, http://unfccc.int/essential_background/convention/items/6036.php (last visited Aug. 22, 2016).
61. *Adoption of the Paris Agreement*, UNFCCC Conference of the Parties, 21st Sess., U.N. Doc. FCCC/CP/2015/10/Add.1 (Dec. 12, 2015), http://unfccc.int/files/home/application/pdf/paris_agreement.

that adaptation to human-induced climate change must be addressed with the same level of priority as mitigation and adopted the Cancun Adaptation Framework (CAF) as part of the Cancun Agreements at the 2010 Climate Change Conference in Cancun, Mexico (16th Conference of the Parties (COP16)/Sixth Conference of the Parties serving as the meeting of the Parties (CMP6)).[62] The objective of CAF is to enhance action on adaptation, including through international cooperation.[63] Implementation of CAF was furthered in the 2011 Durban Climate Change Conference with the Parties agreeing on the Adaptation Committee, work program on loss and damage, and national adaptation plans of action (NAPA). Adaptation implementation plans continued in the 2012 Doha Climate Change Conference.[64] This focus on adaptation comes with the recognition that developing countries require international support (which includes technology transfer, capacity-building, and funding[65]) to meet adaptation challenges.[66]

While the UNFCCC's efforts to address adaptation are laudable and necessary,[67] the existing framework may not be equipped to rise to this complex dimension of adaptation challenge. While scholars note that the UNFCCC has been an invaluable resource in assisting "countries to prepare vulnerability assessments and climate change adaptation plans, as well as providing funding for the implementation of these funds," they also argue that it is challenging for already vulnerable and fragile nations to engage fully with UNFCCC-related activities.[68] It is further observed that climate vulnerability assessments "still lack significant discussion of the political or social impacts of climate change; in addition, most do not address drivers of fragility or other transboundary issues."[69] This limita-

pdf [hereinafter *Paris Agreement*]. Questions have been raised as to whether such commitments reflect obligations under international law. *See* Phillipe Sands, Public Lecture at King's College London: Climate Change and the Rule of Law: Adjudicating the Future in International Law 16 (Sept. 17, 2015), http://www.kcl.ac.uk/law/newsevents/climate-courts/assets/CLIMATE-CHANGE-INT-COURTS-17-Sept.pdf

62. For more information on the Cancun Adaptation Framework, see http://unfccc.int/adaptation/items/5852.php (last visited Aug. 22, 2016).
63. *See id*.
64. *See* UNFCCC, *Adaptation Overview*, http://unfccc.int/adaptation/items/7623.php (last visited Aug. 22, 2016).
65. Funding is provided through the financial mechanism of the UNFCCC. There are four funds set up by the Parties: Green Climate Fund, Special Climate Change Fund, Least Developed Countries Fund, and Adaptation Fund. For more information on funding opportunities, see UNFCCC, *Climate Finance*, http://unfccc.int/cooperation_and_support/financial_mechanism/items/2807.php (last visited Aug. 22, 2016).
66. *See* arts. 4.4, 4.8, and 4.9, UNFCCC; *see also* UNFCCC, *Adaptation Overview*, *supra* note 64.
67. For more information on the UNFCCC's work on adaptation, see UNFCCC, *Adaptation Overview*, *supra* note 64.
68. Rüttinger et al., *supra* note 38, at x.
69. *Id*. at xi.

tion is troublesome. As the case studies above show, climate change-related conflict will not occur in all situations, with particularly fragile nations being more at risk to the adverse consequences of climate change. Therefore, such climate vulnerability assessments may not capture the possibility of the risk of conflict in some situations, rendering adaptation efforts ineffective.

A more comprehensive notion of resilience is increasingly reflected in climate change adaptation plans.[70] This is evidenced by eight of the g7+ nations[71] having included climate-conflict risks in their NAPAs.[72] In addition, although the UNFCCC in 2014 published promising best practice examples for adaptation planning that showcased approaches to tackling human settlements, ecosystems, health, food, and water insecurity,[73] there are some gaps in guidance. For example, there is limited guidance on addressing transboundary issues of climate change consequences (e.g., shared river basins) or on how to develop NAPAs in fragile situations.[74] Transboundary dimensions of climate change that could contribute to transboundary climate fragility risks, in particular, could benefit from a more regional approach to tackling such issues. However, because of the traditional State-oriented nature of the UNFCCC, there is a distinct lack of regional focus in NAPAs.[75]

Climate change-related migration is suggested to be one of the factors that could contribute to conflict. However, scholars argue that despite the UNFCCC's focus on adaptation, the framework has limitations in terms of its structure and institutions in being able to address the issue of climate change refugees.[76] The UNFCCC program "was not designed for, and to date has not adequately dealt with, the problem of climate change refugees."[77] Nevertheless, in its ongoing UNFCCC negotiations, the UNFCCC, in its CAF Decision 14(f), included the need for Parties to take into account cli-

70. *Id.*
71. g7+ is a voluntary association of conflict-affected countries that are in the transition to the next stages of development and are part of the New Deal for Engagement in Fragile States. For more information, see g7+, *Who We Are*, http://www.g7plus.org/en/who-we-are (last visited Aug. 22, 2016).
72. Rüttinger et al., *supra* note 38, at xi.
73. *See Good Practices in and Lessons Learned From National Adaptation Planning, Submissions From Parties and Nairobi Work Programme Partner Organizations*, UNFCCC, Subsidiary Body for Scientific and Technological Advice, 41st Sess., Agenda Item 3, U.N. Doc. FCCC/SBSTA/2014/MISC.8 (2014).
74. Rüttinger et al., *supra* note 38, at xi and 83.
75. Dennis Tänzler et al., *Climate Change Adaptation and Peace*, 1 Wiley Interdisc. Rev. Climate Change 746, 747 (2010).
76. *See, e.g.*, Sumudu Atapattu, Human Rights Approaches to Climate Change: Challenges and Opportunities 158 (2016); David Hodgkinson et al., *Copenhagen, Climate Change "Refugees" and the Need for a Global Agreement*, 4 Pub. Pol'y 159 (2009).
77. Bonnie Docherty & Tyler Giannini, *Confronting a Rising Tide: A Proposal for a Convention on Climate Change Refugees*, 33 Harv. Envtl. L. Rev. 349, 358 (2009).

mate change-induced displacement and migration.[78] While such inclusion is significant as argued by Christine Gibb and James Ford, thereby placing the UNFCCC as an appropriate forum for the climate migration discourse, "it neither obliges signatories to take action nor specifies how implementation should occur . . . ."[79] According to Dennis Tänzler et al., although completed NAPAs to date have mentioned increasing migration as a possibility, "it is hardly addressed in a systematic way,"[80] which leaves another gap in the guidance for adaptation.

The funding mechanisms of the UNFCCC have been criticized by many for being fiscally and technically ineffective.[81] As the International Institute for Environment and Development (IIED) comments, UNFCCC funding streams "are not adequate to meet the adaptation needs in developing countries."[82] For example, States facing fragility risk situations "receive proportionately less climate financing than other developing countries."[83] In addition, access to climate finance by more fragile developing countries has been problematic. This could be due to the limitations of the internal capacity of those countries to access such funds as well as some financing mechanisms (e.g., Least Developed Countries Fund) being less complex and easier to access than others (e.g., Adaptation Fund).[84]

Criticism is also leveled at the implementation of climate change adaptation efforts. The complexity of climate change-conflict situations in which any adaptation efforts will impact "people's lives, livelihoods, asset base and power dynamics" requires adaptation approaches that apply the "do no harm" principle, which requires efforts to "distribute benefits and resources in a conflict-sensitive way that does not aggravate tensions between

78. *Report of the Conference of the Parties on Its Sixteenth Session, Held in Cancun From 29 November to 10 December 2010—Addendum, Part Two: Action Taken by the Conference of the Parties at Its Sixteenth Session, Decisions Adopted by the Conference of the Parties*, UNFCCC, 16th Sess., at 5, U.N. Doc. FCCC/CP/2010/7/Add.1 (2011).

79. Christine Gibb & James Ford, *Should the United Nations Framework Convention on Climate Change Recognize Climate Migrants?*, 7 Envtl. Res. Letters 045601 (2012), http://iopscience.iop.org/article/10.1088/1748-9326/7/4/045601/pdf.

80. Tänzler et al., *supra* note 75, at 747.

81. *See, e.g.*, Mark Grasso, Justice in Funding Adaptation Under the International Climate Change Regime 74 (2010); Ilona Miller et al., *Making Good the Loss: An Assessment of the Loss and Damage Mechanism Under the UNFCCC Process*, *in* Threatened Island Nations: Legal Implications of Rising Seas and a Changing Climate 464 (Michael B. Gerrard & Gregory E. Wannier eds., 2013).

82. *Supporting Adaptation to Climate Change: What Role for Official Development Assistance?*, Int'l Inst. Env't & Dev., Nov. 14, 2008, http://www.iied.org/supporting-adaptation-climate-change-what-role-for-official-development-assistance.

83. Rüttinger et al., *supra* note 38, at 85. *See also* Smita Nakhooda, et al., Climate Finance: Is it Making a Difference?, Overseas Development Institute Report 11 (2014).

84. Rüttinger et al., *supra* note 38, at xi, 85.

communities."[85] Unfortunately, in this regard, "there is limited guidance on how to 'conflict-proof' climate adaptation programmes."[86] There is, however, some evidence of progress in relation to NAPAs, with 45 NAPAs submitted to the UNFCCC by the end of 2010 (21 plans from States with a high risk of destabilization and 19 from States with increased risk of destabilization).[87] Nevertheless, Tänzler et al. caution that integration of adaptation measures can be superficial.[88] In order to ensure a more comprehensive "conflict-proof" climate adaptation approach, "[a] more systematic, integrated approach is needed to meaningfully incorporate existing conflict dynamics—as well as overarching socio-political and economic conditions—into the design of adaptation measures."[89]

As the impacts of climate change could constitute threats to international peace and security, and given the deficiencies in the UNFCCC's adaptation programs, the UNFCCC may not be the best forum to address climate adaptation related to security and armed conflict. Some scholars have argued that environmental protection can be derived from a broader interpretation of the United Nations Charter provisions—including climate change-related threats to peace and security.[90] The United Nations Security Council (UNSC), which has the primary responsibility for international peace and security,[91] appears reluctant to take a direct role in this matter at present. As Shirley V. Scott notes, "[t]here is as yet no consensus on whether the Security Council could or should be proactive in respect of climate change or, if so, of what its contribution to the global efforts might best consist."[92] In fact, both the UNSC and the United Nations General Assembly (UNGA) continue to reaffirm the UNFCCC as the "key instrument for addressing climate change."[93]

The UNFCCC continues to move forward and evolve as evidenced by the historic Paris Agreement adopted by States in December 2015.[94] The

85. *Id.* at xii.
86. *Id.*
87. Tänzler et al., *supra* note 75, at 9.
88. *Id.*
89. *Id.*
90. *See* Voigt, *supra* note 23, at 298; Shirley V. Scott, *Implications of Climate Change for the UN Security Council: Mapping the Range of Potential Policy Responses*, 91 Int'l Aff. 1317, 1333 (2015).
91. U.N. Charter ch. VII.
92. Scott, *supra* note 90, at 1333.
93. *See, e.g.*, *Security Council, in Statement, Says "Contextual Information" on Possible Security Implications of Climate Change Important When Climate Impacts Drive Conflict*, U.N. Security Council, 6587th mtg., U.N. Doc. SC/10332 (2011); G.A. Res. 63/281, U.N. GAOR, 63rd Sess., U.N. Doc. A/RES/63/281 (2009).
94. *Paris Agreement*, *supra* note 61.

key outcomes from the Agreement and accompanying COP21's[95] decision include limiting global temperature rise to well below 2°C, binding commitments by States to make "nationally determined contributions" (NDCs) with regular reports on their progress, reaffirming the binding obligations of developed nations under the UNFCCC to support the efforts of developing countries, extending the current goal of mobilizing $100 billion per year, and incorporating a mechanism to address "loss and damage" resulting from climate change (though explicitly precluding liability and compensation).[96] In addition, the Paris Agreement places just as much importance on adaptation as it does mitigation,[97] establishing "a global goal to significantly strengthen adaptation to climate change through support and international cooperation."[98] However, it makes no specific mention of adaptation to climate change in relation to security and conflict. The Agreement is now open for signature[99] and how these commitments are turned into tangible action remains to be seen.

Even though the UNFCCC has taken a step in the right direction by focusing on adaptation issues as equally important to address as mitigation, there are gaps in the UNFCCC's present adaptation policies, particularly in relation to the vicious cycle of climate change, vulnerability, and conflict, i.e., a lack of more specific guidance on conflict-proof climate adaptation.

## III. Climate Change-related Armed Conflict Through a Climate Justice Lens

Having discussed the limitations of the existing climate change regulatory framework, this section explores approaching climate change-related threats to international peace and security through a climate justice approach. Climate justice, with its multifaceted dimensions of equitable development, human rights, and environmental justice, and its overarching aim to promote more equitable and fair allocation of climate change impact burdens on society, provides a more holistic approach in seeking to meet the challenges of climate change-related conflict. Part A of this section, therefore,

95. *Report of the Conference of the Parties, Adoption of the Paris Agreement*, UNFCCC Conference of the Parties, 21st Sess., U.N. Doc. FCCC/CP/2015/10/Add.1 (2016), http://unfccc.int/resource/docs/2015/cop21/eng/10a01.pdf.
96. United Nations Climate Change Newsroom, *Historic Paris Agreement on Climate Change: 195 Nations Set Path to Keep Temperature Rise Well Below 2 Degrees Celsius*, http://newsroom.unfccc.int/unfccc-newsroom/finale-cop21/ (last visited Aug. 22, 2016).
97. *See Paris Agreement, supra* note 61, at art. 7.
98. United Nations Climate Change Newsroom, *supra* note 96. *See also Paris Agreement*, *supra* note 94.
99. UNFCCC, *Opening for Signature and High-level Signature Ceremony Convened by the UN Secretary-General*, http://unfccc.int/paris_agreement/items/9511.php (last visited Aug. 22, 2016).

provides a brief overview of the concept of climate justice and Part B explores the applicability of climate justice considerations to climate change-related armed conflict.

## A. *Climate Justice: A Brief Overview*

The complexities of climate change-related conflict show that merely attempting to reduce GHG emissions, while crucial, is not enough. Although the UNFCCC framework has in recent years given equal priority to climate adaptation, the complexity of climate change-related conflict in countries with situations of fragility showcase the gaps in this area. The challenges associated with climate change-related conflict illustrate the need for a more holistic approach to tackling adaptation to climate change impacts. Therefore, climate justice[100] considerations may have a role to play in fashioning solutions to these challenges.

The Mary Robinson Foundation has formulated the Principles of Climate Justice, which include principles such as respect and protect human rights; support the right to development; share benefits and burdens equitably; ensure that decisions on climate change are participatory, transparent, and accountable; highlight gender equality and equity; harness the transformative power of education for climate stewardship; and use effective partnerships to secure climate justice.[101] These are principles that could assist societies or nations vulnerable to the adverse impacts of climate change to adapt.

As Jamieson aptly notes, "[c]limate justice is not a single dimension of justice."[102] This is to be expected as the unequal costs and burdens of anthropogenic climate change cannot be answered one dimensionally. Climate justice is thus an integration of principles focusing on the unequal burden of climate change impacts on the most vulnerable and seeks to safeguard their rights, particularly by promoting more equitable and fair allocation of such burdens at the local, national, and international levels. As Ayelet Banai states, "[c]limate justice connotes the normative, social scientific, and policy debates concerned with equitable distribution of these burdens and costs."[103]

100. For more detailed analysis on climate justice, see, e.g., Jouni Paavola & W. Neil Adger, Justice and Adaptation to Climate Change, Working Paper 23, at 1 (Tyndall Centre for Climate Change Research 2002); Chukwemerije Okereke, *Climate Justice and the International Regime*, 1 WIREs Climate Change 462 (2010).
101. Mary Robinson Foundation-Climate Justice, *Principles of Climate Justice*, http://www.mrfcj.org/principles-of-climate-justice/ (last visited Aug. 22, 2016).
102. Dale Jamieson, *Two Cheers for Climate Justice*, 82 Soc. Res. 791, 793 (2015).
103. Ayelet Banai, *Sovereignty Over Natural Resources and Its Implications for Climate Justice*, 7 WIREs Climate Change 238 (2016) (internal citations omitted).

In essence, climate justice is used to refer to distributive considerations associated with climate change consequences and response measures to it.

According to James Goodman, "climate justice responds to the intensifying crises generated by global warming, but also poses, in a double-sided way, the possibilities that the crisis generates."[104] This encapsulates the issues thrown up by climate change-conflict and provides a guiding framework through which to respond to the consequences of climate change. Jouni Paavola and W. Neil Adger argue that the discourse within the UNFCCC ignores many justice concerns, including questions such as "how do adaptive responses impact differentially on individuals and social groups? Do adaptation strategies alleviate or reinforce uneven distributions of power between and within social groups?"[105] Chukwemerije Okereke argues that "[i]n the climate debate, justice concern is rooted in the immense differences in countries' historical and projected contributions to global greenhouse gas emissions, their vulnerability to climate change, and their ability to bear the costs of mitigating or adapting to climate change."[106] What applies in the context of climate change-conflict discussed here would be justice in terms of climate adaptation, such as conflict-proof climate adaptation and bearing the costs of such adaptation.

### *B. Applying Climate Justice Principles to Climate Change and Armed Conflict*

While the UNFCCC taking on adaptation is admirable and necessary,[107] it cannot in its entirety appropriately address the complex adaptation challenges that climate change-related armed conflict presents. A holistic climate justice approach may be a more suitable solution in addressing such challenges. This subsection, therefore, argues that climate justice considerations could contribute to filling the gaps found in the UNFCCC's adaptation policies.

For example, climate vulnerability assessments under the UNFCCC adaptation activities may not appreciate the full account of a fragile State's position.[108] At present, climate vulnerability assessments within the UNFCCC framework lack significant discussion on crucial climate change-associated social and political consequences, drivers of fragility, or transboundary

104. James Goodman, *From Global Justice to Climate Justice? Justice Ecologism in an Era of Global Warming*, 31 New Pol. Sci. 499, 500 (2009).
105. Paavola & Adger, *supra* note 100, at 2.
106. Okereke, *supra* note 100, at 464.
107. For more information on the UNFCCC's work on adaptation, see UNFCCC, *Adaptation Overview*, *supra* note 64.
108. Rüttinger et al., *supra* note 38, at 81.

issues.[109] Both case studies above have demonstrated the complexity of such underlying variable factors in contributing to climate change-related conflict. Climate justice concerns—from recognizing the variation of adaptive responses necessary for different social groups, nations, and regions as well as differences in the impact of such adaptive responses, to ensuring that assessments are participatory, transparent, and accountable—could be included to address the various issues that face developing, more vulnerable countries and produce more focused climate vulnerability assessments. More robust assessments, which include the identification of existing or potential climate change hotspots, could contribute to better early warning policies for preventing or mitigating climate change-conflict scenarios.

Climate change-related conflict in certain circumstances not only crosses State boundaries but also highlights the absence of climate justice. In many cases, it is the unequal burden of climate change impacts among the most vulnerable within society that can contribute towards conflict. Recognizing that these issues can in some circumstances intensify the fragility of a societal group, nation, or region, gaps in UNFCCC guidance for adaptation planning must be improved. At present, the UNFCCC's limited guidance on addressing climate migration and transboundary issues, including taking a regional approach to adaptation issues and the development of NAPAs in fragile situations,[110] makes it difficult for States or regions to develop appropriate climate change-conflict resilience. Plans and policies for adapting to the effects of climate change have to respond to the complex realities of climate-conflict situations. This includes incorporating the requirement for regional cooperation in the matter. Therefore, having some form of effective guidance, taking into consideration climate justice concerns, on how to develop and plan for conflict-proof climate adaptation within the UNFCCC framework is preferable.

The ability to bear the costs of climate change adaptation is another root of the climate justice concept. There are differences in the ability of countries to bear the costs of adapting to climate change impacts. While there are funding streams for adaptation under the UNFCCC framework, the discussion above highlights their inadequacies—including being insufficient to meet the needs of developing countries, States most vulnerable to fragility risk situations (including conflict) receiving much less climate financing, and difficulty in accessing some of the climate funds. Taking into account climate

109. *Id.*
110. *See, e.g.*, Gibb & Ford, *supra* note 79, at 1; Rüttinger et al., *supra* note 38, at xi; Tänzler et al., *supra* note 75, at 747.

justice concerns, the international community should endeavor to improve this existing reality because, without access to such funding required to implement the necessary climate change impact adaptation policies and programs, developing countries most vulnerable to climate change impacts will be unable to make their adaptation efforts climate-conflict proof.

More effective guidance should also be provided for implementation of NAPAs in practice, particularly in relation to implementing "conflict-proof" climate adaptation programs.[111] The equitable distribution of burdens and costs element of climate justice is particularly relevant at the implementation stage. This is because conflict-sensitive adaptation requires the distribution of "resources and benefits in ways that do not aggravate tensions between communities."[112] This means taking into account existing conflict or vulnerable dynamics, whether social, political, economic, or environmental, at all levels—within a community, State, or region. Guidance on implementation should also strongly encourage cooperation at all levels (local to regional), without which the actual implementation of NAPAs may face unnecessary obstacles. A failure to take all these factors into consideration could mean unsustainable development, exacerbation of existing fragility, and a lack of climate change resilience in vulnerable countries, contributing to potential hotspots for climate change-related conflict.

## Conclusion

The impact of climate change transcends boundaries. It is a global issue. While scholarship on the climate change-conflict nexus remains divided, the difficulty of establishing the link between or the impact of climate change-related conflict does not mean there is no need to take action. The case studies have illustrated situations in which climate change impacts exacerbated fragile situations and contributed to conflict. Therefore, it is important not to sideline climate change as a contributing factor to current and future conflicts.

While the UNFCCC, as the primary international legal framework on climate change regulation at present, has taken a step in the right direction by enhancing its focus on adaptation issues, the gaps in its adaptation activities, particularly in relation to the vicious cycle of climate change, vulnerability, and conflict, need improvement. More conflict-sensitive climate vulnerability assessments, specific guidance on conflict-proof climate adaptation, conflict-

111. Rüttinger et al., *supra* note 38, at xii.
112. Rüttinger et al., *supra* note 38, at 87. *See also* Tänzler et al., *supra* note 75, at 741.

sensitive implementation of climate adaptation activities, and adequate funding to allow nations to harness the benefits of UNFCCC adaptation activities are needed. This includes the State-centric UNFCCC moving towards encouraging and strengthening regional cooperation to meet the challenges of climate change adaptation. In light of achieving climate justice, the international community must increase its commitment to climate change adaptation to ensure that vulnerable nations facing socioeconomic and political injustices are not pushed into conflict as a result of climate change impacts. In moving forward with the Paris Agreement, the international community should embrace climate-conflict sensitive factors relevant to adaptation.