POLICY BRIEF – CLIMATE SECURITY

A typology and analysis of climate-related security risks in the first round Nationally Determined Contributions

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INTRODUCTION

This report shares the results of a desk study of the first round of Nationally Determined Contributions (NDCs) conducted by the United Nations Development Programme (UNDP), with contributions from the UNFCCC secretariat. It was developed for informational purposes only. The desk study was intended as a rapid exercise to examine how climate-related security risks are captured in the NDCs. While countries are not required to address climate-related security risks in their NDCs, the ways in which they are articulated may provide a "snapshot" of- and a useful proxy for – the ways in which countries currently understand and address such risks. However, no assumptions were otherwise made with regard to any formal policy position on these issues. Despite the ad hoc methodology, the results of the scan are insightful from a policy perspective, and could inform the work of the Climate Security Mechanism,[1] which was established in 2018 by UNDP, the Department of Political and Peacebuilding Affairs of the United Nations and the United Nations Environment Programme to strengthen United Nations' capacity to address climate-related security risks.

How countries have addressed climate-related security risks in their NDCs can also inform the integration or mainstreaming of climate security dimensions into policy, planning, strategy and programming on both climate change and peacebuilding. Several points are noted in this regard:

1. **Conflict and insecurity are an obstacle to climate action** – countries grappling with violent/armed conflict face reduced institutional capacity and resources to elaborate and implement climate policy, including the strategic vision articulated in a country's NDC. Conflict can also lead to physical destruction of renewable energy facilities, related infrastructure and productive capacities, and thus impair green growth and resilient recovery.

2. **Progress towards peace alone is not necessarily conducive to climate action** – post-conflict economic recovery can put greater pressure on natural resources, alter migration and transhumance patterns (the seasonal movement of livestock), and increase environmental degradation, including deforestation/destruction of carbon sinks, which, in turn, can increase greenhouse gas emissions and negatively impact on coping strategies and resilience. More consideration is needed of the reduction of emissions from deforestation and forest degradation in post-conflict scenarios.

3. **Climate-proofing of post-conflict stabilization and peacebuilding efforts is needed** - there is a risk that climate-impacts on peace and security are only considered as part of a formal climate change strategy and are not mainstreamed into peacebuilding and post-conflict stabilization efforts. The NDCs themselves and the consideration of climate hazards, exposure and vulnerability as they impact on conflict and insecurity in a systematic conflict analysis can help inform prevention efforts. Choosing renewable energy sources (instead of fossil fuels) and clean technologies in reconstruction efforts strengthens resilience and avoids costlier efforts to retrofit renewable and clean technology solutions at a later stage.

[1] The Climate Security Mechanism was established in 2018 to strengthen the UN's capacity address climate related security risks, through a conceptual approach and toolbox for integrated climate-related security risk assessments, the design of early warning, risk prevention and management strategies, and fostering the evidence base. Its work supported by Sweden, Norway, Germany and the UK. For more information on the Climate Security Mechanism, please see here.

4. **The co-benefits of adaptation for sustaining peace still need to be better understood, but more attention is also needed to the interlinkages between energy security, mitigation and peace** – much more attention has been devoted to the examination of the co-benefits of adaptation for peacebuilding than mitigation. Both are important. Access to energy, in particular renewable energy solutions, is often overlooked and presents opportunities not only for mitigation-as-adaptation (or the co-benefits of mitigation for adaptation and resilience) but also to reduce competition for natural-capital dependent livelihoods and coping strategies, and relieve pressure on basic services and overburdened infrastructure, including in areas receiving internally displaced persons and refugees.

5. **Transboundary climate-related security risks need to be better accounted for where relevant** – adequate consideration needs to be given to shared risks related to transboundary resources, the spillover effects of climate-related security risks for neighbouring countries and the co-benefits of transboundary adaptation. Examination of direct, indirect and systemic risks and inter-scalar externalities can help identify opportunities for sub-regional/regional cooperation.

The structure of the report is as follows: Section I introduces key concepts relevant to this study; Section II describes the approach employed and introduces the typology developed on the themes observed in the NDCs; Section III presents an overview of the data points compiled on climate-related security risks from the NDCs, according to the typology; and Section IV provides an overall summary of the main findings.

I. CLIMATE-RELATED SECURITY RISKS

While climate change does not directly or inherently cause violent conflict, its interaction with other social, political and economic factors can exacerbate drivers of conflict and fragility and have negative impacts on peace, stability and security. The United Nations Secretary-General recognized climate change as a "threat multiplier" in his 2009 report, Climate change and its possible security implications (A/64/350). The report identified five mechanisms through which climate change can affect security: (i) vulnerability: threats to food security and human health and increase exposure to extreme events; (ii) development: slowing down or reversal of development gains, exacerbating vulnerability and undermining State capacity to maintain stability; (iii) coping and security: increased migration, competition over natural resources and other coping strategies, thus increasing the risk of domestic conflict, with international repercussions; (iv) statelessness: loss of rights, security, sovereignty and/or statehood due to the permanent inundation of territories; and (v) international conflict owing to its impacts on shared or undemarcated international resources.[5]

Box I: The Paris Agreement and National Determined Contributions

The Paris Agreement requires Parties to submit NDCs[2], documents that formally communicate their emission reduction targets and climate policies to contribute to keeping global warming to well below 2 °C above pre-industrial levels, pursue efforts to limit such warming to 1.5 °C and adapt to climate change. Parties submitted their intended NDCs before the adoption of the Paris Agreement; most then resubmitted their intended NDC as their first NDC when they ratified the Paris Agreement.[3]

NDCs are updated every five years. The second or updated NDC is due in 2020, although some delays are anticipated owing to the COVID-19 pandemic. A global stocktake[4] process considers each Party's progress and makes recommendations for the next round of NDCs. The first global stocktake[4] will take place in 2023. A majority of the first NDCs submitted include an overview of the climate-related risks to socioeconomic development, and a number of countries also provide information on climate-related risks to peace, stability and security in their national contexts.

[2] See the UNFCCC website for more information about the NDCs.
[3] Note: 37 of the 41 documents analyzed in this report are officially NDCs, and the remaining four are "intended" NDCs. All NDCs submitted to the UNFCCC Secretariat are available in the NDC interim registry here, while all "intended" NDCs are available in the INDC portal here. Note: all documents available in the NDC interim registry have the formal status of NDCs, even if the document itself bears the title "intended" NDC. This difference is due to the fact that the same document was originally submitted as an "intended" NDC, and later automatically converted into an NDC when the Party ratified the Paris Agreement. The dates of submission identified in this document reflect the date on which they were uploaded into the NDC interim registry or the INDC portal.
[4] More information on the UNFCCC global stocktake is available here.
[5] United Nations. Secretary-General (2009). Climate change and its possible security implications: report of the Secretary-General.

Box II: Why address climate-related security risks in NDCs and national climate change policies, planning and programming?

- The impact of climate change on conflict, stability and security risks is already evident in many countries and highlights the urgent need to reach net-zero emissions as soon as possible, to raise and accelerate climate ambition, and to enhance NDC commitments and investments in conflict-sensitive mitigation, adaptation and resilience.

- Conflict and other security risks can exacerbate the vulnerability of communities to climate change and undermine the achievement of NDC goals and targets, and thus need to be factored into vulnerability and risk assessments.

- A holistic approach to addressing conflict and security risks of climate change, in addition to socio-economic and disaster risks, can help increase resilience, reduce fragility, and avoid maladaptation. This is particularly salient in areas with a history of conflict and insecurity. It is important to embed approaches to inclusive decision-making, conflict resolution and social cohesion to ensure conflict-sensitive adaptation and mitigation.

- Climate change policy and programming is recognized to generate co-benefits for peace, stability and security. Climate-proofing of peacebuilding, stabilization and reconstruction efforts can avoid lock-in into unsustainable high-carbon development pathways while peace-positive adaptation and mitigation can help reduce conflict risk and recurrence, as well as insecurity. Mainstreaming in both directions is necessary and a dual approach to climate action and sustaining peace can be transformative.

- From the desk review of the NDCs, it is not apparent why some do not consider security aspects at all, particularly in the case of conflict-affected and fragile states. There could be a risk that such factors are not considered within the ambit of relevant planning processes. In this regard, policymakers might: draw on any existing conflict analyses (to avoid policy and programming inadvertently affecting inter-communal or existing conflict dynamics), engage peace and security expertise/actors, ensure the participation by relevant stakeholder groups; consider the addition of other relevant non-GHG emission targets, focus on strengthening coping capacity – as affected by conflict and security; and targeting climate and fragility 'hotspots'.

The United Nations Security Council, which has primary responsibility for maintaining international peace and security, first discussed climate change in an open debate in 2007. Four other such debates have followed, along with statements by the President of the Council and "Arria-formula" meetings on climate change. The Security Council has also acknowledged climate change impacts in various resolutions and mandates in recent years. These include resolution 2349 (2017) on West Africa and the Sahel, which recognizes that climate change and ecological change affect stability in the region and that there is a "need for adequate risk assessments and risk management strategies by governments and the United Nations relating to these factors". [6] For the purpose of this exercise, "climate-related security risks" are thus understood as the adverse impacts of climate change on human security[7]– the 'freedom from fear' and 'freedom from want' – but also how such impacts relate to the security of the State and the maintenance of international peace and security under the United Nations Charter.[8] The Fifth Assessment Report of the Intergovernmental Panel on Climate Change stresses that "human security will be progressively threatened as the climate changes (robust evidence, high agreement)", but also emphasizes that "some of the factors that increase the risk of violent conflict within States are sensitive to climate change (medium evidence, medium agreement)". [9] Beyond the direct risks of climate impacts, the Fifth Assessment Report also stresses that "maladaptation or greenhouse gas mitigation efforts at odds with local priorities and property rights may increase the risk of conflict in populations, particularly where institutions' governing access to property are weak, or favor one group over another". [10]

[6] United Nations Security Council (2017). S/RES/2349 (2017).
[7] Adger, W.N. et al. (2014). 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. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, pp. 755-791.
[8] United Nations (1945). Charter of the United Nations and International Court of Justice.
[9] Adger, W.N. et al. (2014).
[10] Noble, I.R. et al. (2014). Adaptation needs and options. In: Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects.

II. APPROACH

With a view to further understanding how climate-related security risks were tackled in the first round of NDCs,[11] this quick scan provides a summary and analysis of direct references to conflict, peace, security, stability, war, etc., as proxy indicators in 40 NDCs.[12] To avoid ambiguity and facilitate a more nuanced analysis, general references to food security, livelihood security, energy security and water security, which are too numerous to assess, were excluded from this scan. Observed references to "conflict" thus refer to the physical sense of the term (i.e. violent and/or armed conflict) rather than the abstract sense (e.g. conflicting institutional priorities).[13] All 186 first NDCs were reviewed for this scan. From the relevant data points, purposive sampling was used to narrow down the analysis to a subset of 40 NDCs examined in this report. The focus of the exercise was to investigate and document how climate-related security risks are addressed in NDCs, rather than to draw conclusions relevant to all NDCs. Countries that referred to climate-related security risks are heterogeneous in terms of their national and development contexts and include low- and middle-income countries, Small Island Developing States and countries affected by conflict and fragility. Mention of climate-related security risks occurs in NDCs from different geographic regions, including the Arab States region, Asia and the Pacific, Latin American and the Caribbean, and sub-Saharan Africa.

To make the information more accessible, the data aggregated through the two scan processes has been organized into a typology of six overarching climate and security risk-related themes. The themes and explanation of their scope are outlined, as follows:

1. **Climate change as a security/national security issue** – different connections are made, and aspects of security are referenced in relation to climate change. Climate action is recognized as a national security issue, or as important to ensuring national security. Climate hazards and extreme weather events are regarded as threats to security, and some impacts, in particular sea-level rise, as existential threats. Broader definitions of security are also noted, including the need to preserve human security or cultural security in highly climate-affected contexts.

2. **Climate change exacerbating extant conflict dynamics and security risks** – climate change is observed to impact on conflict and security risks in different ways. It affects conflicts through certain pathways including acute ecological scarcities, livelihoods and migration, as well as water and other natural resource-based conflicts. Increased violent conflicts between farmers and herders are noted in several instances. An overlap is noted between regions with high levels of poverty, conflict and social or political instability that are also highly exposed to climate hazards. Conflict is, however, not the only security risk identified. A lack of access to alternative energy and loss of climate sensitive livelihoods is described as fuelling illicit economies. Sea level rise will result in loss of land and property and may increase conflict risks.

[11]Second generation or updated NDCs are being submitted in 2020, around the time of the publication of this report. As second or updated NDCs are still under development and not available to review, they have not been considered in this analysis. Please see Box I and footnote 3 for more details on NDCs.
[12]Afghanistan, Algeria, Armenia, Chad, Central African Republic, Colombia, Costa Rica, Dominica, Dominican Republic, El Salvador, Eritrea, Guinea, Guinea-Bissau, Indonesia, Iran, Jordan, Kiribati, Lebanon, Liberia, Madagascar, Mali, Marshall Islands, Mauritania, Mexico, Nauru, Nigeria, Niue, Philippines, Saint Vincent and the Grenadines, Solomon Islands, Somalia, South Sudan, Sudan, Syrian Arab Republic, Timor-Leste, Tonga, Tuvalu, Viet Nam, Yemen and Zambia
[13]A study by Jernnäs & Linnér (2019) of NDCs finds that 85 of the 136 NDCs submitted by 164 Parties included mention of climate change as "an urgent security threat". For more details see Jernnäs, M. & Linnér, B.O. (2019). A discursive cartography of nationally determined contributions to the Paris climate agreement. Global Environmental Change, Volume 55, March 2019, pp. 73–83.

3. **Lack of security as an obstacle to climate action** – a country's security situation affects climate action in many ways. Conflict affects adaptive capacity at the community level and political stability is needed for the implementation of NDCs. Conflict destroys infrastructure and productive capacities and sets back development achievements. Countries and communities suffering energy insecurity and hosting large refugee or IDP populations may likely face increased energy requirements, but also higher resulting GHG emissions from deforestation due to increased firewood consumption. Conflict and the restrictions on international funding impact on the capacity and financial resources needed to enact policy, including on climate change.

4. **Co-benefits of adaptation and mitigation for preventing conflict and sustaining peace** – reduced social conflict as well as conflict related to land use are recognized as co-benefits of climate change adaptation. Both adaptation and mitigation are noted as important considerations in peacebuilding. Renewable electrification allows the fostering of economic development and can help foster social cohesion.

5. **Measures to integrate climate and security considerations** – efforts to mainstream climate related security risks, including integrating climate change into peace and security on the one hand, but also prevention and peacebuilding considerations into NDCs, on the other. Disaster prevention and response are framed as priority security actions in the context of climate change adaptation. Solutions including secure back-up energy systems are needed by the security sector, sub-national vulnerability assessments targeting conflict-affected areas, and climate change impacts on political stability and national need to be taken into account in regional strategies.

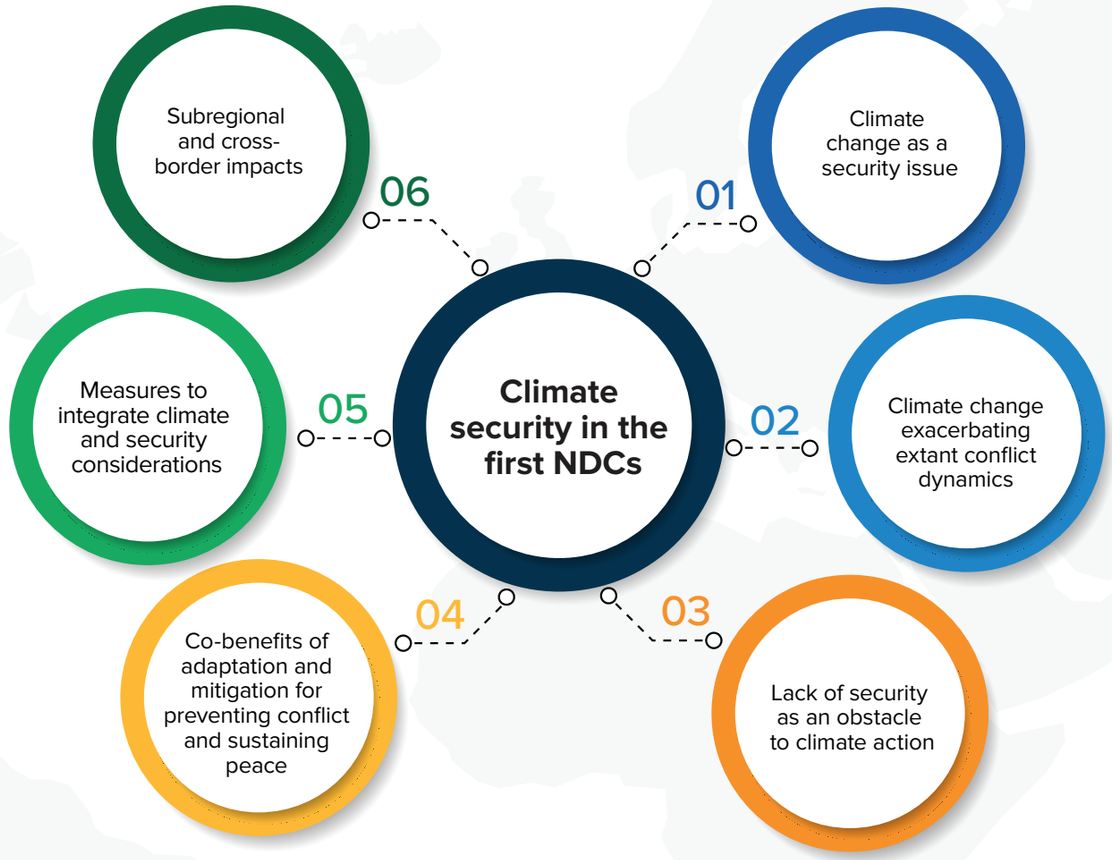
6. **Subregional/regional cross-border impacts** – conflict in neighbouring countries alters human mobility patterns. Incoming refugee populations can mean an increase in energy resources required to meet their needs, but can increase the risk of conflict. Without strengthened governance, resilience and implementation of pastoral codes; climate change may impact on transnational transhumance and interregional conflict. Transboundary effects are also noted in terms of demand from export markets which can drive logging, deforestation and related illicit economies.

The themes are neither mutually exclusive nor necessarily exhaustive. Subthemes under these six categories are also noted below. Figure 1 captures the six themes, along with some country examples.

FIGURE I: TYPOLOGY OF SIX OVERARCHING THEMES IN FIRST ROUND NDCS

- Central African Republic: adaptation can help preventing interregional conflict.
- Guinea: climate change means Guinea will be transhumance destination nation for herders and better transboundary pastoralism is needed to tackle conflict.
- Jordan and Lebanon: make reference to regional conflicts affecting NDC achievement.

- Armenia: ensuring national security requires prioritizing adaptation.
- Guinea: climate-induced migration from Sahel can trigger land-use conflicts.
- Liberia: coastal erosion can cause displacement and "undermine national security".
- South Sudan: climate change threatens national security by jeopardizing water resources and access to pasture/livestock, and thus livelihoods. This has caused conflicts among pastoralists.
- Tuvalu: climate impacts threaten the security of the nation.



- Algeria: adapt by integrating climate change to political stability and national security.
- Colombia: adaptation = national security issue; integrate climate in peace process.
- Nigeria: adaptation measures include emergency energy and communications systems for civil society and security forces.
- Saint Vincent and the Grenadines: incorporated national security and adaptation into development planning; aims to mainstream adaptation to national security issues.

- Central African Republic, Chad, Mali, Guinea, Somalia and South Sudan: climate change exacerbating farmer-herder conflict
- Indonesia: risk of political instability in areas most affected by climate change.
- Nigeria: climate change contributing to current conflicts and insecurity.
- Yemen: climate change causing further tensions and conflicts.

- State of Palestine: reduced conflict as a co-benefit of adaptation.
- Mali: adaptation can ensure resilience and reduce conflict between farmers and herders.
- Somalia: UN SC Resolution 2036 (ban illegal export of charcoal) can help combat deforestation and land degradation and reduce influence of militias (charcoal exports are used to fuel the war economy).

- Jordan: climate action would require a stable security environment.
- Central African Republic: 2012-13 conflict => insecurity and damage. to production and administration. Climate effort requires overcoming security challenges/consolidation of peace and security.
- Lebanon: hosts 1 million refugees, stretching economy and resources.
- Yemen: prepared its NDC in a precarious security situation, political turmoil and armed conflict. Nevertheless, it was a participatory process and built on a national climate change assessment.

III. OVERVIEW OF DATA POINTS ON CLIMATE-RELATED SECURITY RISKS DESCRIBED IN NATIONALLY DETERMINED CONTRIBUTIONS

1. Climate change as a security/national security issue

All 40 NDCs examined contain one or more references to "conflict", "peace", "security", "stability" and/or "war". Some contributions, including those from Afghanistan,[14] Algeria,[15] Armenia[16], Colombia,[17] Costa Rica,[18] the Dominican Republic,[19] El Salvador,[20] the Marshall Islands,[21] Nauru,[22] Nigeria,[23] South Sudan,[24] Tuvalu,[25] Viet Nam[26] and Zambia,[27] acknowledge climate change as a security/national security issue in a preambular manner, setting the context for the scope of the NDC. The potential impacts of unabated climate change on political stability are noted in this way, for example, by Guinea-Bissau[28] and Madagascar[29] in their NDCs. Liberia[30] articulates the effects of coastal erosion not only in terms of economic development and infrastructure investments, but also as having the potential to "severely undermine national security", and Mauritania[31] describes how extreme weather events affect fisheries (particularly inland) and exacerbate conflicts among local and indigenous groups. Colombia also describes climate change adaptation as a matter of national security, framing it specifically within the context of ongoing peacebuilding efforts.

In terms of specific threats to national security, rising sea levels is a key recurrent theme among Small Island Developing States. Kiribati[32] notes that sea level rise, apart from causing inundation and salinization of groundwater resources, could also result in an "increase in conflict and stress due to loss of property and land, and forced migration". Closely related to this is the existential threat posed by climate change articulated by Nauru and Tonga.[33] Solomon Islands[34] also states that "climate change threatens the very existence of the people and the nation" and that "adaptation is not an option – but rather a matter of survival".

While national security is the most commonly mentioned, it is not the only security narrative observed. Other security narratives noted include explicit references to human security by the Philippines[35] and Timor-Leste.[36] Tuvalu likewise stresses the link between cultural and socio-economic vulnerabilities and national security, and Niue[37] emphasizes the threat of climate change to social stability and Niue culture.[38] Broader references to energy, food and water security, however, go beyond the scope of this study, as noted above.

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[14] Afghanistan, NDC, 23 November 2016.
[15] Algeria, NDC, 20 October 2016.
[16] Armenia, NDC, 23 March 2017.
[17] Colombia, NDC, 12 July 2018.
[18] Costa Rica, NDC, 13 October 2016.
[19] Dominican Republic, NDC, 21 September 2017.
[20] El Salvador, NDC, 30 October 2017.
[21] Marshall Islands, NDC, 22 April 2016.
[22] Nauru, NDC, 7 April 2016.
[23] Nigeria, NDC, 16 May 2017.
[24] South Sudan, intended NDC, 23 November 2015.
[25] Tuvalu, NDC, 22 April 2016.
[26] Viet Nam, NDC, 3 November 2016.
[27] Zambia, NDC, 9 December 2016.
[28] Guinea-Bissau, NDC, 22 October 2018.
[29] Madagascar, NDC, 21 September 2016.
[30] Liberia, NDC, 27 August 2018
[31] Mauritania, NDC, 27 February 2017.
[32] Kiribati, NDC, 21 September 2016
[33] Tonga, NDC, 21 September 2016.
[34] Solomon Islands, NDC, 21 September 2016.
[35] Philippines, intended NDC, 1 October 2015.
[36] Timor-Leste, NDC, 16 August 2017.
[37] Niue, NDC, 28 October 2016.
[38] For more on the cultural aspects of human security, see Adger et al. (2014).

2. Climate change exacerbating extant conflict dynamics and security risks

Indonesia[39] articulates how climate change can affect underlying social tensions and conflict dynamics, stressing that "socioeconomic disparity will potentially contribute to political instability in regions most affected by climate change". For its part, Yemen[40] observes that climate change and the resulting ecological scarcity and livelihood impacts could cause "further social tensions and resources [sic] conflicts". Nigeria describes aridity as a potential driver of natural resource conflicts, as reduced opportunities for sustainable agriculture could be a "contributing factor to the current conflict and high degree of insecurity" in the country's north-east region. Sudan[41] also stresses that the interaction between climate change and other systemic risks, including land degradation, can give rise to "complex disasters and conflicts".

In terms of types of conflicts, references to farmer-herder conflicts being exacerbated by climate change are made by several countries in sub-Saharan Africa, including the Central African Republic,[42] Chad,[43] Guinea,[44] Mali,[45] Somalia[46] and South Sudan. Likewise, as one of the largest livestock-producing countries in Africa, South Sudan acknowledges "deadly conflicts" taking place among pastoralist communities and recognizes that "the impacts of climate change thus also cause national security issues". In Latin America and the Caribbean, El Salvador stresses the challenge of addressing historical social inequalities at the time of increasing climate vulnerability, insecurity and violence.

Somalia makes one of the most comprehensive assessments of climate-related security risks in its NDC, recounting 14 major drought events recorded over the last 50 years that adversely affected over six million people. Somalia also describes how climatic variability and climate change, together with land degradation, have increased rural-to-urban migration and thus contributed to "increased conflict over natural resources and the continued loss of lives and livelihoods". Somalia also refers to its 2013 National Adaptation Programme of Action[47] and related consultations, which acknowledge the "increase in [the] incidence of conflict over diminishing natural resources such as water and grazing land, significant migration and displacement of people, and loss of primary assets such as livestock". The intersection between climate and security risks, such as conflict and compromised coping capacity, is also emphasized by Somalia, including "the breakdown of state institutions, protracted conflict, weakening of traditional systems of decision-making on access to resources, absence of alternative sources of energy and limited livelihoods options [which] have led to unsustainable production and trade of charcoal, fueled by constant demand for charcoal on the international market".

[39] Indonesia, NDC, 6 November 2016
[40] Yemen, intended NDC, 21 November 2015.
[41] Sudan, NDC, 2 August 2017.
[42] Central African Republic, NDC, 11 October 2016.
[43] Chad, NDC, 12 January 2017.
[44] Guinea, NDC, 21 September 2016.
[45] Mali, NDC, 23 September 2016.
[46] Somalia, NDC, 22 April 2016.
[47] National Adaptation Programmes of Action submitted to the UNFCCC Secretariat are available here.

3. Lack of security as an obstacle to climate action

The potential effects of conflict on the ability of Member States to deliver on their climate change commitments is highlighted in various NDCs. The Syrian Arab Republic[48] stresses that war has impacted on the realization of development objectives and its mitigation and adaptation efforts, as its agriculture sector and productive structures have been adversely affected by both climate change and war. This is echoed by Afghanistan, which describes security, as well as a lack of climate data, awareness and funding as the main challenges to adaptation. The Dominican Republic notes security as a challenge in respect of both mitigation and adaptation.

Jordan[49] likewise describes continued conflict and insecurity in the region, its humanitarian response efforts (including its assistance to refugees and forced migrants, which comprise 13% of the population) and an increased demand for energy (97% of which is imported and comprised of crude oil, oil derivatives and natural gas) place a significant burden on national resources. More specifically, Jordan notes that insecurity and conflict could affect the achievement of the renewable energy targets of its 2025 National Vision and Strategy. Lebanon[50] also describes how conflict and instability in the region could undermine its NDC achievement: a refugee population of 1.13 million increased the country's population by 30% in just two years, increasing national energy needs and firewood consumption by 10%. Yemen describes how its intended NDC was prepared in the context of a challenging security situation, and Eritrea[51] articulates the lasting impacts of war on its capacity to develop environmental policy and strategy. Niue refers to the challenge of realizing greenhouse gas emission reductions while preserving social stability and Niue culture.

A number of conflict-affected countries, including Eritrea and the Islamic Republic of Iran,[52] refer to physical damage to key infrastructure, agriculture, productive capacities and/or the environment, as well as to relevant policies and/or delivered results. The Central African Republic emphasizes that achieving its NDC emission reduction targets will require, inter alia, the "consolidation of peace and security". Colombia states that in order to increase the ambition of its NDC emission reduction target from 20% to 30% with respect to a business-as-usual scenario, it would need to increase energy efficiency and tackle fugitive emissions and deforestation in a post-conflict scenario, citing the observed increases in deforestation in post-conflict situations in other regions. Somalia also highlights that during the conflict, its renewable energy capacity (mostly comprised of wind turbines in Mogadishu) was destroyed, and installation of hydropower capacity, in particular the construction of Fanoole Dam (1977-1982), was delayed. Somalia hints that recovery from conflict could make use of renewables such as solar, wind and hydro and geothermal energy sources.

[48] Syrian Arab Republic, NDC, 30 November 2018.
[49] Jordan, NDC, 4 November 2016.
[50] Lebanon, NDC, 5 February 2020.
[51] Eritrea, NDC, 19 June 2018.
[52] Islamic Republic of Iran, intended NDC, 21 November 2015.

4. Co-benefits of adaptation and mitigation for preventing conflict and sustaining peace

Countries undergoing conflict recognize adaptation as part of a long-term solution to sustaining peace. The Central African Republic stresses that its post-conflict context and political transition have increased its socioeconomic vulnerability to climate hazards, that stabilization is important to its development goals and that adaptation can help avoid interregional conflict, but must also target the most vulnerable. The State of Palestine[53] identifies "reduced social conflict" as a co-benefit of its adaptation efforts, while Mali references priority adaptation actions, including ensuring the resilience of pastoralists to climate change, as a means of reducing conflict between farmers and herders.

Somalia identifies the implementation of Security Council resolution 2036 (2012), which bans the illegal export of charcoal from the country, as a key measure to reduce greenhouse gas emissions from deforestation and degradation of rangelands, with the co-benefit of reducing the influence of the militia groups, as such exports contribute some US$15 million to the war economy and benefit militia groups who serve as gatekeepers.

5. Measures to integrate climate and security considerations

Several countries identify measures they intend to take to address climate-related security risks, or to otherwise integrate climate and security considerations into policies, strategies and peacebuilding processes. For example, Saint Vincent and the Grenadines[54] has mainstreamed adaptation into plans that cover, inter alia, national security aspects. Similarly, Algeria is developing a national climate change adaptation plan, which aims at considering "political stability and national security". Colombia's NDC recognizes that building peace poses economic, social and environmental challenges, some of which can be addressed through climate action, and highlights as a priority the "consolidation of peace territories taking into account climate change considerations".

Somalia's priority climate change adaptation measures include the protection of water resources, as well as vulnerability and risk assessments which focus on drought- and conflict-affected regions. The need for conflict sensitivity in adaptation efforts is illustrated by Somalia's efforts to ensure access to watering points: since water is a matter of survival, watering points can become triggers of conflicts between nomadic peoples. Adaptation efforts involving watering points must be designed carefully to take this risk into account. Climate vulnerability and the risks to the security of "strategic infrastructure" is also mentioned by Mexico[55] along with the need to "guarantee the security of dams and strategic hydraulic infrastructure, as well as communications and transportation strategic infrastructure". Nigeria intends to develop energy and communication backup systems for security forces and civil society, an adaptation measure that seeks to enhance preparedness for emergencies, while Viet Nam stresses the need to ensure national defense and security in its climate change adaptation plans for 2021–2030.

[53] State of Palestine, NDC, 21 August 2017.
[54] Saint Vincent and the Grenadines, NDC, 29 June 2016.
[55] Mexico, NDC, 21 September 2016.

6. Sub-regional/regional cross-border impacts

The inter-scalar or transboundary impacts of climate change and conflict on vulnerability, and, conversely, the solutions and transboundary co-benefits for peace and security offered by climate action, are recursive themes in the NDCs. As mentioned above, the Islamic Republic of Iran, Jordan and Lebanon describe how regional conflicts affect NDC achievement and climate action. Dominica[56] also mentions that international conflict can increase vulnerability to climate change.

Guinea's NDC considers that "serious conflicts over land use" due to its favorable climatic conditions which make the country a popular transhumance destination. To reduce conflict risks, it aims to promote effective management of pastoralism, especially transnationally. Guinea also suggests that successful management of water resources and carbon sinks, and "stimulating thinking on the ECOWAS Regional Transhumance Plan", could help avoid conflict and stabilize the region. As described in the previous section, the Central African Republic also notes that adaptation can help prevent interregional conflict

[56] Dominica, NDC, 21 September 2016.

IV. CONCLUSION

This report takes stock of how climate-related security risks are framed in the first NDCs by outlining a typology of emerging themes. The most frequently cited references are to: theme 3: conflict as an obstacle to climate action, theme 1: climate change as a security/national security issue and theme 2: climate change exacerbating extant conflicts and insecurity, with respectively more than a dozen each theme. Around half as many references are made to theme 4: co-benefits of adaptation and mitigation for preventing conflict and sustaining peace, theme 5: measures to address climate and security and theme 6: subregional/regional cross-border impacts. Such differences in the degree of consideration may be due to a greater understanding or the risks and by comparison, a more limited understanding and awareness of co-benefits, integrated solutions and regional effects. It is also worth noting that these themes are not mutually exclusive. In 12 NDCs, two or more of the six themes identified in the typology (described in Section II) are observed. Among these countries, Central African Republic, Colombia, Guinea, and Somalia each make reference three or more of the identified themes. These countries are respectively ranked 179th, 89th, 144th and 179th on the 2018 ND GAIN matrix which measure the vulnerability of and readiness scores of 181 countries.[57] The analysis shows that climate change is recognized by many countries as a matter of national security, but also as a factor that exacerbates the drivers of different types of conflict and security risks. Conflict and insecurity are also described in the NDCs as increasing vulnerability to climate change and/or as being potentially disruptive to climate action and to the achievement of NDC targets, including in post-conflict situations.

While the challenge of achieving peace in contexts affected by climate change is stressed in some NDCs, peace is also recognized as not being necessarily conducive to climate action alone. Referencing the experience of other regions, Colombia observes the link between peace processes and increased pressures on natural resources, changing migration patterns and environmental degradation, including deforestation, which it states should be factored into post-conflict scenarios. This highlights the importance of climate-proofing peacebuilding efforts. In this regard, several countries outline concrete measures to integrate climate and security considerations. This includes considering climate change impacts in peacebuilding and security strategies and also ensuring conflict sensitivity in adaptation planning.

The dual burden of addressing climate change and conflict or other security risks, including delivering on climate action in conflict-affected settings, is an emergent theme. Adaptation and mitigation (including through carbon sequestration) are recognized in NDCs as having co-benefits for peacebuilding and regarded as an important part of strategies for preventing conflict or sustaining peace in conflict-affected areas. While similar climate- and security-related themes can be seen in different NDCs, the counterfactual scenario should also be considered, along with its implications, as there are likewise many conflict-affected countries that do not address conflict or other security risks at all in the scope of their NDC submissions. Given the very different country contexts and the ad hoc methodology employed (i.e. desk studies of the submitted NDCs), it is not yet possible to generalize or draw conclusions applicable to all NDCs. Further examination or a comparative study of second round NDCs could afford other insights or new perspectives.

[57] University of Notre Dame (2018). Notre Dame Global Adaptation Initiative

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