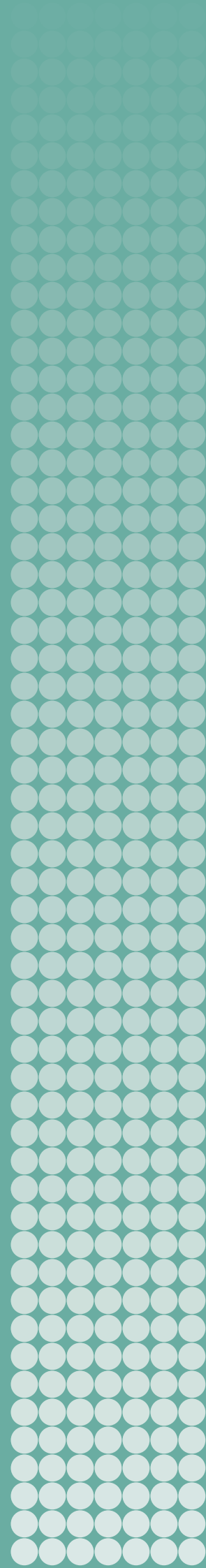


# **BURNING GROUND**

Tackling Climate Change and  
Conflict in South-central Somalia

KHEIRA TARIF



**STOCKHOLM INTERNATIONAL  
PEACE RESEARCH INSTITUTE**

SIPRI is an independent international institute dedicated to research into conflict, armaments, arms control and disarmament. Established in 1966, SIPRI provides data, analysis and recommendations, based on open sources, to policymakers, researchers, media and the interested public.

The Governing Board is not responsible for the views expressed in the publications of the Institute.

**GOVERNING BOARD**

Stefan Löfven, Chair (Sweden)  
Dr Mohamed Ibn Chambas (Ghana)  
Ambassador Chan Heng Chee (Singapore)  
Dr Noha El-Mikawy (Egypt)  
Jean-Marie Guéhenno (France)  
Dr Radha Kumar (India)  
Dr Patricia Lewis (Ireland/United Kingdom)  
Dr Jessica Tuchman Mathews (United States)

**DIRECTOR**

Dan Smith (United Kingdom)



**STOCKHOLM INTERNATIONAL  
PEACE RESEARCH INSTITUTE**

Signalistgatan 9  
SE-169 70 Solna, Sweden  
Telephone: +46 8 655 97 00  
Email: [sipri@sipri.org](mailto:sipri@sipri.org)  
Internet: [www.sipri.org](http://www.sipri.org)

# **BURNING GROUND**

Tackling Climate Change and  
Conflict in South-central Somalia

KHEIRA TARIF

May 2024



**STOCKHOLM INTERNATIONAL  
PEACE RESEARCH INSTITUTE**

© SIPRI 2024

DOI No: 10.55163/ZZWG4815

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted, in any form or by any means, without the prior permission in writing of SIPRI or as expressly permitted by law.

# Contents

<i>Acknowledgements</i>	iv
<i>Summary</i>	v
<b>1. Introduction</b>	1
The environmental peacebuilding framework	2
<b>2. Climate change, conflict and compounding risks in south-central Somalia</b>	5
Conflict and governance	5
Geography and climate change	6
Climate-related security risks	7
Figure 2.1. Map of Somalia's Federal Member States and map of the Galmudug and Hirshabelle states, where the Deegan Bile projects took place	6
<b>3. The environmental peacebuilding approach of the Deegan Bile projects</b>	9
Conflict analysis	9
Project design	10
Box 3.1. The International Organization for Migration	10
Box 3.2. Theories of change for addressing climate change and conflict	11
<b>4. Opportunities of the environmental peacebuilding approach</b>	13
Natural resource management	13
Cross-clan collaboration	18
State–society relationships	20
Box 4.1. The role of SIPRI as a research partner in the Deegan Bile projects	16
Table 4.1. Perception survey data responses	14
Table 4.2. Focus group discussion locations and number of participants	15
<b>5. Challenges of the environmental peacebuilding approach</b>	24
Maladaptation risk: Balancing the interests of humans and nature	24
Political challenges: Sustaining positive outcomes in the context of conflict	26
Evaluation challenges: Capturing long-term changes in communities and the environment	27
<b>6. Lessons learned from the Deegan Bile projects</b>	28
Lesson 1: Natural resource governance can support local peacebuilding	28
Lesson 2: Climate action can support peacebuilding	28
Lesson 3: Climate action can support the development of formal governance structures	29
<b>7. Conclusions</b>	31
<i>About the author</i>	32

## Acknowledgements

The perception survey and focus group discussions carried out as part of this research project would not have been possible without Shourjya Deb (SIPRI) and the Elman Peace team, led by Ilwad Elman. The author is grateful to the people who reviewed and provided feedback on early versions of this paper: Anniek Barnhoorn, Virginie Baudais, Farah Hegazi, Osman Jama, Florian Krampe, Karen Meijer and Jason Mosely. Special thanks go to the International Organization for Migration Somalia team, led by Daniel Norfolk and Rikka Tupaz, and to Christophe Hodder (United Nations Environment Programme) for their willingness to share lessons learned and discuss new ideas.

## Summary

Somalia is one of the countries most vulnerable to the impacts of climate change, in part because of the enduring effects of over three decades of violent conflict. From mid-2021 to early 2023 Somalia experienced its most severe drought on record. At the height of the drought, in August 2022, clan militias and the Somali Armed Forces launched operations against the armed group Al-Shabab in areas of south-central Somalia that have little to no government presence and very limited capacity to cope with the effects of drought. In 2022, some 1.3 million people were internally displaced by drought and more than 600 000 (the highest number in over a decade) by violent conflict.

There is an urgent need to address the effects of climate change and the drivers of conflict in Somalia, but there are few examples of initiatives that seek to address both issues in tandem. This paper presents findings from two European Union-funded projects led by the International Organization for Migration (IOM) in Somalia, in partnership with the United Nations Environment Programme (UNEP) and SIPRI. The Deegan Bile ('enhancing the environment' in Somali) projects sought to use climate action as a platform for reducing violent conflict over natural resources in the Federal Member States of Galmudug and Hirshabelle.

This paper examines the Deegan Bile projects as examples of environmental peacebuilding, which encompasses approaches that address the environmental impacts of conflict and identify environment-related opportunities for peacebuilding. It finds that approach used by the IOM can support credible, inclusive local institutions for natural resource management, foster cross-clan collaboration on climate-smart infrastructure and nature-based solutions, and forge or strengthen relationships between formal authorities and rural communities through their joint design, planning and implementation of activities aimed at both climate action and conflict reduction. All these factors are essential to the success of climate action and peacebuilding initiatives.

This research has also identified lessons for comparable environmental peacebuilding approaches. Policymakers and practitioners should carefully consider the need to delicately balance the interests of humans and nature in project design, the imperative to ensure the political sustainability of project outcomes, and the necessity to comprehensively evaluate both the social and the environmental impacts of a project—which is difficult given the short time frames of project implementation periods and the narrow indicators available.

As the global community grapples with the intertwined challenges of climate change and conflict, there is a real need for iterative responses that facilitate action and learning in tandem. The Deegan Bile projects therefore offer crucial insights into both the opportunities and the hurdles for designing and implementing environmental peacebuilding approaches that address the impacts of climate change while also contributing to sustainable peace in fragile contexts. This paper therefore concludes with lessons for climate action and peacebuilding that could be applied more broadly in Somalia as well as in other fragile and conflict-affected areas. It highlights lessons for gender-sensitive environmental peacebuilding, for evaluating the long-term impacts of environmental peacebuilding, for community-based approaches that are context-specific and flexible, and for connecting rural development to political peace processes.





# 1. Introduction

‘The ground beneath our feet is burning. What do you think this will do to livestock?’<sup>1</sup> This sentiment, voiced by a participant of a focus group discussion in QodQod, located in Somalia’s south-central Hirshabelle Federal Member State, echoes the stories shared of how rising temperatures and prolonged droughts have decimated livestock and severely affected every household in the community. In 2023, drought became the leading cause of displacement.<sup>2</sup>

From mid-2021 to early 2023 Somalia experienced its most severe drought on record; five consecutive failed rainy seasons led to the displacement of hundreds of thousands of people and the devastation of livelihoods, and raised the spectre of famine in some areas.<sup>3</sup> Climate change is affecting the Horn of Africa.<sup>4</sup> Higher air temperatures and increasing evaporation have a significant impact on the frequency of droughts, and their severity—including the most recent one.<sup>5</sup> In the midst of this devastation, in August 2022 clan militias and the Somali Armed Forces launched operations against the armed group Al-Shabab in areas of south-central Somalia that have little to no government presence and very limited capacity to cope with the effects of drought.<sup>6</sup>

As climate change accelerates and decades-long conflict persists in Somalia, there is a pressing need for responses that address both challenges in tandem. The convergence of climate change and conflict is undermining livelihoods and local economies. Disasters that are rendered more likely because of climate change, such as droughts and floods, and military and armed group operations disproportionately affect marginalized and minority groups, exacerbating an already precarious humanitarian situation and limiting opportunities to support resilience and peace.<sup>7</sup> The projections for climate change in Somalia indicate it will likely contribute to increasingly intractable climate-related security risks that are hard to address.

In the light of these challenges, a European Union funded collaboration between the International Organization for Migration (IOM), the United Nations Environment Programme (UNEP) and SIPRI applied an innovative approach to addressing climate change and conflict in Somalia. Two IOM-led projects, known as the Deegan Bile (‘enhancing the environment’ in Somali) projects, were implemented in the Federal Member States (FMS) of Galmudug (from January 2022 to June 2023) and Hirshabelle (from August 2022 to February 2024). The aim of these projects was to (a) strengthen natural resource governance in the face of compounding challenges posed by climate change and conflict and (b) reduce the incidence of violent conflict over natural resources (including water, pastures, forests and fisheries) by using climate action to build more resilient livelihoods and local economies.<sup>8</sup>

As a research partner to the projects, SIPRI explored how the IOM approach of addressing climate change together with conflict can support both climate action and peacebuilding. This paper presents findings from the Deegan Bile projects for

<sup>1</sup> Participant in a focus group discussion, QodQod, Somalia, 27 Jan. 2024.

<sup>2</sup> For data on displacement in Somalia, see Global Camp Coordination and Camp Management (CCCCM) Cluster, *New Arrivals Tracking Tool*, [n.d.], accessed 20 Jan. 2024.

<sup>3</sup> For data on the impacts of the drought, see United Nations Office for the Coordination of Humanitarian Affairs (OCHA), *Horn of Africa Drought Data Explorer*, [n.d.], accessed 20 Jan. 2024.

<sup>4</sup> Climate change is characterized by long-term shifts in temperatures and weather patterns.

<sup>5</sup> World Weather Attribution, ‘Human-induced climate change increased drought severity in Horn of Africa’, 27 Apr. 2023.

<sup>6</sup> International Crisis Group, *Sustaining Gains in Somalia’s Offensive against Al-Shabaab*, Crisis Group Africa Briefing no. 187 (International Crisis Group: Mogadishu, Mar. 2023).

<sup>7</sup> OCHA, *Humanitarian Needs Overview: Somalia*, Humanitarian programme cycle 2023 (OCHA: Feb. 2023).

<sup>8</sup> The two Breaking the Climate–Conflict Cycle projects, in Galmudug and Hirshabelle, are funded by the European Commission’s Foreign Policy Instruments.

researchers, practitioners and policymakers interested in examples of climate action promoting peacebuilding in fragile and conflict-affected areas. The paper combines these findings with those from community perspectives in the Deegan Bile target areas and from academic research.

The paper finds that the environmental peacebuilding approach applied by IOM in the Deegan Bile projects can support credible, inclusive local natural resource management that reduces local conflicts. It also finds that the approach can foster cross-clan collaboration on climate action, including nature-based solutions.<sup>9</sup> Furthermore, it finds that the planning and implementation of such projects can forge or strengthen relationships among state-level government ministries and bring local authorities closer to rural communities through participatory design, planning and implementation of project activities. In addition, the paper identifies and discusses three challenges or trade-offs associated with the approach used in the Deegan Bile projects: the risk of maladaptation (unintended, adverse consequences) arising from the projects, the political sustainability of the projects' outcomes, and limitations in monitoring and evaluating and therefore understanding the impacts of the projects.

### The environmental peacebuilding framework

As a research partner to IOM and UNEP, SIPRI approached the Deegan Bile projects as environmental peacebuilding case studies. Environmental peacebuilding encompasses approaches to addressing the environmental impacts of conflict and to identifying environment-related opportunities for peacebuilding. This framework is applicable to the Deegan Bile projects because IOM has identified the effects of climate change on the environment as a driver of both violent conflict and forced displacement and, as such, has pinpointed climate change adaptation as an entry point to building local resilience to climate variability, conflict and forced displacement.<sup>10</sup>

Environmental peacebuilding recognizes that well-designed approaches to cope with or manage environmental issues 'can support conflict prevention, mitigation, resolution and recovery'.<sup>11</sup> While the academic literature has sometimes theorized that environmental issues are drivers of violence and conflict, environmental peacebuilding rests on the assumption that the environment can incentivize collaboration and overcome zero-sum logic.<sup>12</sup> Environmental and natural resource governance are theorized to strengthen (a) intergroup relationships (through collaboration), (b) environmental and other governance norms, and (c) state service provision and state-society relationships.<sup>13</sup> Case studies have demonstrated the potential of environmental peacebuilding to contribute to conflict reduction through capacity building and collaboration on implementing projects—including those related to ecosystem restoration, equitable water access and sustainable agricultural practices—which lead to tangible benefits

<sup>9</sup> Nature-based solutions encompass actions aimed at protecting, managing and restoring ecosystems.

<sup>10</sup> Climate change adaptation encompasses measures to adapt to rather than mitigate the effects of climate change. Climate variability refers to changes in weather that last longer than individual weather events.

<sup>11</sup> Ide, T. et al., 'The past and future(s) of environmental peacebuilding', *International Affairs*, vol. 97, no. 1 (Jan. 2021), p. 3.

<sup>12</sup> de Soysa, I., 'Ecoviolence: Shrinking pie, or honey pot?' *Global Environmental Politics*, vol. 2, no. 4 (Nov. 2002); Collier, P. and Hoeffler, A., *Greed and Grievance in Civil War*, Policy Research Working Paper no. 2355 (World Bank: Washington, DC, May 2000); Conca, K. and Dabelko, G. D., *Environmental Peacemaking* (Woodrow Wilson Center Press/Johns Hopkins University Press: Washington, DC/Baltimore, MD, 2002); and Dresse, A. et al., 'Environmental peacebuilding: Towards a theoretical framework', *Cooperation and Conflict*, vol. 54, no. 1 (Mar. 2019).

<sup>13</sup> Krampe, F., Hegazi, F. and VanDeveer, S. D., 'Sustaining peace through better resource governance: Three potential mechanisms for environmental peacebuilding', *World Development*, vol. 144 (Aug. 2021).

such as supported livelihoods and strengthened relationships between groups in conflict.<sup>14</sup>

The emphasis on joint project implementation in environmental peacebuilding echoes other research findings suggesting that infrastructure projects can support peacebuilding when they are used as a platform for dialogue and for building on the shared interests of parties in conflict. For infrastructure development to be an effective peacebuilding approach, it must support human-driven, intergroup peace processes; therefore, its relationship to peacebuilding ‘can emerge only in interaction with what people actually use [the infrastructure] for . . .’.<sup>15</sup> The infrastructure approach is distinct from post-conflict (re)construction, which is often aimed at supporting post-conflict development, economic growth and rural–urban integration, because the design and building of the infrastructure becomes a peacebuilding processes in itself. The infrastructure approach should also be linked to—rather than operate in parallel with or be used as a substitute for—other peacebuilding efforts, and it should be able to adapt—on the basis of close assessment—to the local context before, during and after construction.<sup>16</sup>

Environmental peacebuilding is not without pitfalls, and in some cases has been perceived as a greenwashing effort to normalize existing structural inequalities without providing justice, including environmental justice, to marginalized groups.<sup>17</sup> Environmental peacebuilding can also have unintended adverse consequences, such as depoliticizing structural conflict drivers, displacing communities (e.g. for nature conservation), reinforcing discrimination and inequality, exacerbating conflict dynamics, delegitimizing formal authorities and contributing to environmental degradation.<sup>18</sup> Case studies underscore the need to mitigate these risks by conducting analyses of structural inequalities that can lead environmental peacebuilding initiatives to be co-opted by stronger groups or to reinforce the marginalization of weaker groups. They also highlight the potential for large-scale infrastructure projects (e.g. dams, peace parks) to cause more damage than localized and tailored environmental peacebuilding initiatives.<sup>19</sup>

Taken together, environmental peacebuilding and ‘infrastructure as peacebuilding’ research points to the opportunities that climate change mitigation and climate change adaptation present for peacebuilding.<sup>20</sup> Climate action entails large-scale shifts in patterns of resource extraction, land use and distribution of financial resources, which increases its potential to generate negative societal impacts by reinforcing existing or creating new inequalities.<sup>21</sup> For climate action to contribute to positive social change, the environmental peacebuilding literature emphasizes the importance of achieving peace outcomes with processes of change that are inclusive (e.g. of different societal

<sup>14</sup> Johnson, M. F., Rodríguez, L. A. and Quijano Hoyos, M., ‘Intrastate environmental peacebuilding: A review of the literature’, *World Development*, vol. 137 (Jan. 2021).

<sup>15</sup> Bachmann, J. and Schouten, P., ‘Concrete approaches to peace: Infrastructure as peacebuilding’, *International Affairs*, vol. 94, no. 2 (Mar. 2018), p. 390.

<sup>16</sup> Fantini, C. et al., *Infrastructure for Peacebuilding: The Role of Infrastructure in Tackling the Underlying Drivers of Fragility* (United Nations Office for Project Services: Copenhagen, Sep. 2020); Bachmann and Schouten (note 15); and van Tongeren, P. et al., ‘The evolving landscape of infrastructures for peace’, *Journal of Peacebuilding and Development*, vol. 7, no. 3 (Dec. 2012).

<sup>17</sup> Ben-Shmuel, A. T. and Halle, S., ‘Beyond greenwashing: Prioritizing environmental justice in conflict-affected settings’, *Environment and Security*, vol. 1, no. 3–4 (Dec. 2023).

<sup>18</sup> Ide, T., ‘The dark side of environmental peacebuilding’, *World Development*, vol. 127 (Mar. 2020).

<sup>19</sup> Ide (note 18).

<sup>20</sup> Climate change mitigation encompasses actions taken to limit climate change.

<sup>21</sup> Buhaug, H. et al., ‘Climate-driven risks to peace over the 21st century’, *Climate Risk Management*, vol. 39 (2023).

groups and different gender perspectives), conflict-sensitive and cognizant of relevant power dynamics.<sup>22</sup>

Environmental peacebuilding is not a new field, yet the number of examples of how these processes are applied in practice and how they can be sequenced to reinforce positive outcomes is limited.<sup>23</sup> Examples of the impacts of climate change on conflict and of the opportunities provided by climate action for peacebuilding are even rarer.<sup>24</sup> Dresse et al. (2019) proposed filling this gap by examining environmental peacebuilding processes from three angles: (a) initial environmental and sociopolitical conditions; (b) mechanisms by which conflict is addressed and how the mechanisms are implemented; and (c) direct and indirect, as well as expected and actual, outcomes and benefits.<sup>25</sup> This paper is structured along these lines and utilizes the environmental peacebuilding framework in exploring the approach used by IOM in the Deegan Bile projects and in clarifying the lessons that emerge for environmental peacebuilding approaches in Somalia and other fragile and conflict-affected countries or areas.

Chapter 2 of this paper summarizes the context of the Deegan Bile projects in terms of conflict and governance in Somalia, Somalia's geography and vulnerability to climate change, and compounding risks relating to the interaction between climate change and conflict in Somalia. Chapter 3 highlights the elements of environmental peacebuilding incorporated in the design and approach of the projects. Chapter 4 presents the findings from the projects structured along (a) natural resource management, (b) cross-clan collaboration and (c) state–society relationships. Chapter 5 discusses challenges and trade-offs of the environmental peacebuilding approach. Finally, chapter 6 concludes with lessons learned from the Deegan Bile projects and implications for climate action and peacebuilding in Somalia and other fragile and conflict-affected countries or areas.

<sup>22</sup> Bruch, C. and Woomer, A., *Toolkit on Monitoring and Evaluation of Environmental Peacebuilding* (Environmental Law Institute: Washington, DC, Nov. 2023).

<sup>23</sup> For examples of relevant projects, see Centre for Humanitarian Dialogue, *Agro-pastoral Mediation in the Sahel (Burkina Faso, Mali, Mauritania, Niger and Chad)* (Centre for Humanitarian Dialogue: Geneva, 2021); and IOM Nigeria, 'IOM partners with Mercy Corps and Search for Common Ground on a project to mitigate conflict between farmer and herder communities in Adamawa State', Press release, 22 June 2022.

<sup>24</sup> Krampe, F. et al., 'Climate change and peacebuilding: Sub-themes of an emerging research agenda', *International Affairs*, iiae057 (Apr. 2024).

<sup>25</sup> Dresse et al. (note 12).

## 2. Climate change, conflict and compounding risks in south-central Somalia

### Conflict and governance

Somalia has experienced violent conflict for more than 30 years, during which its governance systems have become fragmented and contested. It is a federal republic, with a federal government whose seat is in the capital, Mogadishu, five FMS (see figure 2.1) and a self-declared independent state (Somaliland).<sup>26</sup> Governance is based on a model of clan consociationalism under which the ‘4.5 formula’ allocates most parliamentary seats to the four main clans, with the remaining seats reserved for minority clans as well as women from both the major and the minor clans.<sup>27</sup> Disagreement over the different governing roles of the Federal Government of Somalia and the FMS continue to fuel political tensions, which impede the finalization and ratification of the 2012 provisional Constitution. In practice, governance remains heavily fragmented between formal and informal (local) authorities, the latter of which includes civil society groups and non-state armed groups that provide services in parts of the country without the presence of formal authorities.<sup>28</sup>

The armed group Al-Shabab has been the primary focus of counter-terrorism and stabilization strategies in Somalia for most of the past two decades. While Somali Government and African Union troops control many cities and the supply routes between them, Al-Shabab wields significant influence in parts of southern Somalia as well as in some rural areas and small towns in other parts of the country.<sup>29</sup> In towns under Al-Shabab control, the group’s role in local governance encompasses security and inter-clan dispute resolution, which includes the enforcement of court orders. Despite recent territorial gains made against Al-Shabab in Galmudug and Hirshabelle FMS, the group continues to negotiate agreements with disaffected clans that allow it to maintain a presence in areas outside its control.<sup>30</sup>

The conflict with Al-Shabab intersects with other conflict dynamics in Somalia, including tensions around political power-sharing and local-level violence over natural resources. In many cases, conflicts in Somalia are framed by clan affiliations and the competing interests between different clans.<sup>31</sup> The UN estimates that inter-clan and intra-clan conflicts account for 35–40 per cent of reported violence in Somalia.<sup>32</sup> Conflict at all levels has detrimental effects: the threat of attacks on civilians and infrastructure, recurring and protracted displacement, restricted freedom of movement and food insecurity all affect Somali communities.<sup>33</sup> Furthermore, humanitarian, develop-

<sup>26</sup> Somaliland is internationally recognized as part of Somalia. Puntland, one of the five FMS, is a self-declared autonomous state.

<sup>27</sup> ConstitutionNet, ‘Constitutional history of Somalia’, [n.d.], accessed 13 Mar. 2024.

<sup>28</sup> Jama, O. M. et al., ‘Participation of civil society in decisions to mitigate environmental degradation in post-conflict societies: Evidence from Somalia’, *Journal of Environmental Planning and Management*, vol. 63, no. 9 (July 2020).

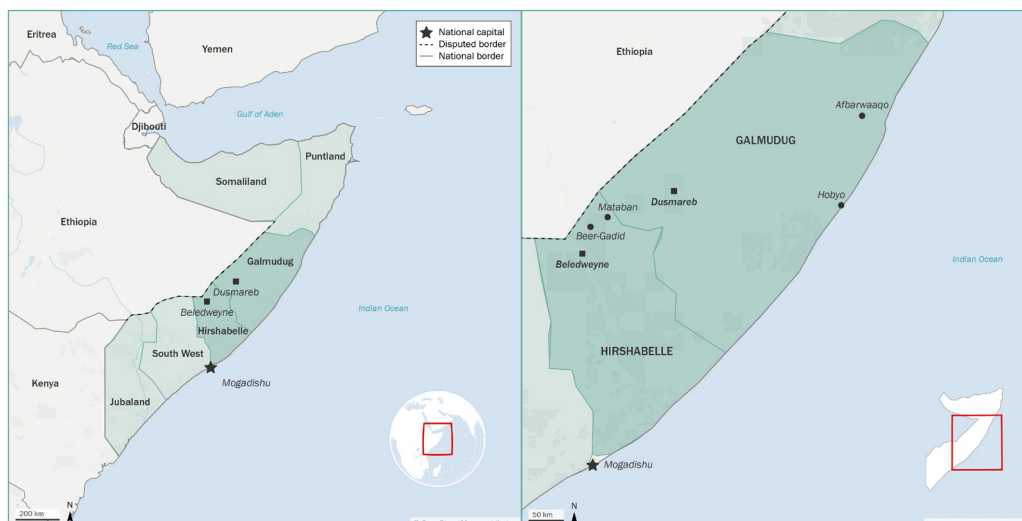
<sup>29</sup> See, for example, map 1 (‘Somalia: Approximate Territorial Control, 30 November 2022’ (source: Political Geography Now)), p. 12, in European Union Agency for Asylum (EUAA), *Somalia: Defection, Desertion and Disengagement from Al-Shabaab*, Country of Origin Information (EUAA and Publications Office of the European Union: Luxembourg, 2023).

<sup>30</sup> Mubarak, M. and Jackson, A., *Playing the Long Game: Exploring the Relationship between Al-Shabab and Civilians in Areas Beyond State Control* (ODI: London, Aug. 2023).

<sup>31</sup> International Crisis Group, *Avoiding a New Cycle of Conflict in Somalia’s Galmudug State*, Crisis Group Africa Briefing no. 193 (International Crisis Group: Mogadishu, Sep. 2023).

<sup>32</sup> United Nations Somalia, *United Nations Sustainable Development Cooperation Framework 2021–2025* (United Nations Somalia: Oct. 2020).

<sup>33</sup> OCHA, *Humanitarian Response Plan: Somalia*, Humanitarian programme cycle 2023 (OCHA: Feb. 2023); and OCHA, ‘Somalia: Flash update on the situation in Laas Caanood, Sool Region’, no. 4, 3 Apr. 2023.



**Figure 2.1.** Map of Somalia's Federal Member States and map of the Galmudug and Hirshabelle states, where the Deegan Bile projects took place

ment and peacebuilding organizations have limited access to much of the country owing to conflict.

### Geography and climate change

Climate change is driving up temperatures worldwide, leading to more erratic rainfall patterns and increased frequency and severity of extreme weather events. Somalia is one of the countries most exposed and most vulnerable to climate change.<sup>34</sup>

Somalia is experiencing an increase in mean annual temperature and a reduction in Gu season (April to June) rainfall.<sup>35</sup> In the next 30 years, temperatures are projected to rise by 1.5–2.3 °C compared with pre-industrial levels.<sup>36</sup> Rainfall projections are less certain, but inter-annual variability is expected to increase the frequency and severity of droughts and floods.<sup>37</sup>

The hottest and driest conditions in south-central Somalia are found in Galmudug's northern-most administrative region, Mudug.<sup>38</sup> But rising air temperatures and evaporation, more erratic rainfall, and decreasing water availability and vegetation cover affect farmers and herders (who are estimated to account for 72 per cent of the national population) across Somalia.<sup>39</sup> More frequent extreme weather events leave individuals and communities with less time to recover from shocks.

In April 2022 the UN Office for the Coordination of Humanitarian Affairs (OCHA) estimated that as much 80 per cent of water sources across Somalia had dried up as a result of successive failed rainy seasons. The lack of rainfall also affected the Juba River and Shabelle River basins, where water levels were below historical minimums.<sup>40</sup>

<sup>34</sup> Intergovernmental Panel on Climate Change, *Climate Change 2022: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change*, eds H.-O. Pörtner et al. (Cambridge University Press: Cambridge, 2022); and Notre Dame Global Adaptation Initiative, *ND-GAIN Country Index*, country rankings, [n.d.], accessed 20 Jan. 2024.

<sup>35</sup> World Bank Group, *Climate Change Knowledge Portal*, 'Somalia: Current climate—Trends and significant change against natural variability', [n.d.], accessed 20 Jan. 2023.

<sup>36</sup> Binder, L. et al., *Climate Risk Profile Somalia*, Weathering Risk and the AGRICA project (Potsdam Institute for Climate Impact Research/adelphi: Potsdam/Berlin, Feb. 2022).

<sup>37</sup> World Bank, *Somalia Climate Risk Review* (World Bank: Washington, DC, 2023).

<sup>38</sup> World Bank Group, *Climate Change Knowledge Portal*, 'Somalia: Current climate—Climatology', [n.d.], accessed 20 Jan. 2023.

<sup>39</sup> United Nations Somalia, *Common Country Analysis 2020* (United Nations Somalia: Sep. 2020).

<sup>40</sup> OCHA, 'Somalia: 2022 drought impact snapshot', 9 Mar. 2022.

### Climate-related security risks

Research has contributed to elucidating the complex and context-specific relationships between climate change, human security and conflict.<sup>41</sup> It has become evident that the effects of climate change can undermine development gains, exacerbate ongoing violence and disrupt peace—and by fuelling existing inequalities and tensions, climate change can indirectly increase the risk of conflict.<sup>42</sup> Some research has highlighted that the shifting pattern of resource management from community to private control increases the risk of conflict over natural resources.<sup>43</sup> Violent conflict and political instability both weaken community resilience to the effects of climate change.<sup>44</sup>

The compounding effects of climate change and conflict in Somalia undermine the coping capacities of individuals and households and limit their opportunities to build long-term resilience to both these challenges. The historic drought in 2021–23 severely impacted livelihood security in Somalia; exceptionally high water and fodder prices combined with crop failure and livestock death decimated agropastoral incomes.<sup>45</sup> Community resilience to the climate shock was further weakened by conflict, which led to restricted access to water, pastures and livestock markets. For example, an outbreak of violence in the Las Anod area in Somaliland led to bans on commercial traffic and thus reduced livestock flows from neighbouring Galmudug.<sup>46</sup>

At the height of the drought, in 2022, some 1.3 million people were internally displaced by drought and more than 600 000 (the highest number in over a decade) by violent conflict.<sup>47</sup> Migration can serve as a mechanism for coping with insecurity. This forced displacement has negative effects on the security of households. For example, in Hirshabelle, numerous farming households experienced reduced livelihood and food security when they were forced to abandon their crops owing to military operations against Al-Shabab.<sup>48</sup> Military operations also reduce the physical security of people and livestock; according to one report, military operations in Galmudug limited pastoralists' access to their usual grazing grounds and reduced their livestock migration, which increased their vulnerability to the effects of the drought.<sup>49</sup> Displacement can also heighten local tensions; when different clans come into contact, conflict can arise over, for example, access to fresh water and pastures for livestock. This is supported by household survey data collected in Galmudug that suggests conflicts over livestock are more common in areas where people use seasonal migration to cope with the effects of droughts.<sup>50</sup>

Conflict, drought and displacement impact communities and groups in different ways. A high level of inequality exists between men and women in Somalia, and women have limited access to education, financial services, employment, political represen-

<sup>41</sup> Ide, T. et al., 'The future of environmental peace and conflict research', *Environmental Politics*, vol. 32, no. 6 (2023).

<sup>42</sup> Ide et al. (note 41); and Buhaug et al. (note 21).

<sup>43</sup> See examples in Tarif, K. et al., *Climate, Peace and Security Research Paper: Insights on Climate, Peace and Security* (SIPRI: Stockholm, Dec. 2023).

<sup>44</sup> Tarif et al. (note 43); and Buhaug, H. and von Uexkull, N., 'Vicious circles: Violence, vulnerability, and climate change', *Annual Review of Environment and Resources*, vol. 46 (Oct. 2021).

<sup>45</sup> Integrated Food Security Phase Classification (IPC), 'Somalia: Acute food insecurity and malnutrition snapshot: June–December 2022', 12 Sep. 2022.

<sup>46</sup> World Food Programme Somalia, 'Situation report on Laas Caanood response', 28 Apr. 2023; International Crisis Group, 'Time for Somaliland and the Dhulbahante to talk', 19 May 2023; and Radio Ergo, 'Hiran farmers' profits hit by conflict in Somaliland', 17 Mar. 2023.

<sup>47</sup> OCHA (note 7); and Internal Displacement Monitoring Centre, 'Country profile: Somalia', [n.d.], accessed 28 Aug. 2023.

<sup>48</sup> Radio Ergo, 'Conflict forces farming families to abandon their land in Beletweyne to languish in IDP camps', 18 Nov. 2022.

<sup>49</sup> Radio Ergo, 'Galgadud pastoralists caught between drought and conflict', 19 Feb. 2023.

<sup>50</sup> IOM, *DTM Galmudug District Profiling: Household Assessment*, Analysis Brief (IOM Somalia: Sep. 2023).

tation and justice. Men and women experience conflict in different ways because of different gender norms and roles. Some gender norms and roles have shifted as a result of conflict, allowing women and girls to assume more responsibility for generating household income, for example.<sup>51</sup> Half of all Somali women live within 50 kilometres of armed conflict.<sup>52</sup> Women and children also make up an estimated 80 per cent of displaced people.<sup>53</sup> Men are vulnerable to forced recruitment into armed groups and mass killings. Gender-based inequalities hamper efforts to identify and address the specific needs and roles of Somali men and women in climate change adaptation.

Under the current clan-based power-sharing system of the Somali Government, an estimated 30 per cent of the population is considered to belong to a minority clan. Minority clans are disproportionately affected by disasters because their coping capacities are undermined by direct violence, in the form of attacks by stronger clans, as well as by structural violence, discrimination, lack of resources and the prevailing system of clan patronage, which facilitates the elite's control of people, information and resources.<sup>54</sup>

As the effects of climate change become more pronounced in Somalia, the ways in which they influence existing conflict dynamics and merge with social, economic and political realities will become more complex and the compounding risks more difficult to address. The limited number of practical examples of combined climate change and conflict responses poses a challenge to implementing such responses. The Deegan Bile projects can, therefore, offer important lessons in how to evaluate the climate–conflict nexus and identify entry points to building resilience to the effects of climate change and reducing the incidence of related conflict, as well as reducing the displacement related to both.

<sup>51</sup> El-Bushra, J. and Gardner, J., 'The impact of war on Somali men: Feminist analysis of masculinities and gender relations in a fragile context', *Gender and Development*, vol. 24, no. 3 (Sep. 2016).

<sup>52</sup> Georgetown Institute for Women, Peace and Security (GIWPS) and Peace Research Institute Oslo (PRIO), *Women, Peace, and Security Index 2023/24: Tracking Sustainable Peace through Inclusion, Justice, and Security for Women* (GIWPS/PRIO: Washington, DC, 2023).

<sup>53</sup> OCHA (note 7).

<sup>54</sup> Minority Rights Group, 'Somalia', [n.d.], accessed 13 Mar. 2024; The United Nations Accountability Project–Somalia, 'Neither inevitable nor accidental: The impact of marginalization in Somalia', eds M. Keating and M. Waldman, *War and Peace in Somalia: National Grievances, Local Conflict and Al-Shabaab* (Oxford University Press: Oxford, 2019); and Majid, N. et al., *Another Humanitarian (and Political) Crisis in Somalia in 2022* (Feinstein International Center, Tufts University: Boston, June 2022).



### 3. The environmental peacebuilding approach of the Deegan Bile projects

The Deegan Bile projects were designed by IOM and UNEP and implemented by IOM Somalia's Community Stabilization Unit. The unit conducts activities that seek to address drivers of instability in Somalia, including conflict and climate change. It implements projects in areas of south-central Somalia that have recently been (re)captured from Al-Shabab (also called 'newly recovered' territories) and supports the development of credible local governance structures as an alternative to the governance of non-state armed groups.<sup>55</sup> For more information on IOM, including in Somalia, see box 3.1.

#### Conflict analysis

The Deegan Bile Galmudug and Hirshabelle projects were designed to address local conflicts that stem from the contested control of natural resources in communities segregated by clan affiliations.<sup>56</sup> Water and pastures are crucial to local livelihoods and predominantly agropastoral economies, but decades of weak formal governance have led to natural resources being managed by informal local committees, if at all. This fragmented approach to natural resource management increases the risk of environmental degradation as climate change leads to higher temperatures and reduced rainfall. Informal natural resource management can serve as a platform for resolving tensions around water and pastures, particularly when those resources are situated on the boundaries of different clan territories. But environmental degradation and increasingly scarce natural resources can mean that communities are less willing to negotiate access with other clans for fear that doing so will undermine their own livelihood security—this increases the potential for conflict over access to natural resources.<sup>57</sup>

IOM, in its conflict analysis, mapped clan territorial control, pastoralist mobility patterns, water points, vegetation cover and conflict incidents to better understand the relationship between clan conflicts and natural resource management and to identify areas in Galmudug and Hirshabelle suitable for implementing project activities. In Galmudug, data collected during a field assessment showed that conflict over natural resources can occur during periods of relative scarcity and of abundance, which supports research findings that demonstrate the importance of socio-economic and political factors in determining the conflict potential of climate change.<sup>58</sup> This analysis was confirmed in Hirshabelle, where the field assessment found that the effects of the drought on natural resources and livelihood security were exacerbated by military operations that restricted mobility and trade. In Hirshabelle's Mataban District, clan conflicts over natural resources were found to primarily affect men, whereas relationships between women from different clans were more peaceful; therefore, women were able to retrieve lost livestock from another clan's land because they would not be attacked.<sup>59</sup>

The analysis conducted by IOM explored how different conflict dynamics feed into and exacerbate each other, how local clan conflicts increase community vulnerability to exploitation by non-state armed groups such as Al-Shabab, and how rural conflicts

<sup>55</sup> IOM Somalia, 'Community stabilization', [n.d.], accessed 4 Jan. 2024.

<sup>56</sup> This chapter is based on unpublished IOM project documents and conversations with IOM staff.

<sup>57</sup> IOM field teams note that the relationships between climate change, environmental degradation, natural resource management and clan conflicts are very complex and context-specific.

<sup>58</sup> Unpublished IOM field assessment, Galmudug, Aug. 2021.

<sup>59</sup> Unpublished IOM field assessment, Hirshabelle, Feb. 2023.

**Box 3.1. The International Organization for Migration**

The International Organization for Migration (IOM) is part of the United Nations system. Its primary goal is to facilitate ‘the orderly and humane management of international migration’ through interventions that span humanitarian assistance and sustainable development.<sup>a</sup> It was one of the first intergovernmental organizations to establish an institutional division for developing policies on migration, the environment and climate change. The objectives of IOM in this regard are to prevent forced migration resulting from environmental factors; assist, protect and seek durable solutions for affected populations; and facilitate migration in the context of climate change adaptation and resilience-building.<sup>b</sup>

In Somalia, the IOM works in various dimensions of climate change, including providing support to the Government of Somalia for implementing its policies on climate change mitigation and adaptation; contributing to the reduction of climate-related displacement and conflict; and harnessing climate adaptation practices in durable solutions programming.<sup>c</sup>

<sup>a</sup> IOM, *IOM Strategy*, IOM document no. MC/INF/287, 9 Nov. 2007, p. 3.

<sup>b</sup> IOM, ‘Migration, environment and climate change’, [n.d.], accessed 13 Dec. 2023.

<sup>c</sup> IOM, *IOM Somalia Strategic Plan 2022–2025* (IOM: Mogadishu, 2022).

between clans have spillover effects on urban political clan tensions (and vice versa). The need was identified for the Deegan Bile projects to bridge rural development with political peacebuilding by working in newly recovered territories to support credible local institutions that can respond to the everyday needs of communities by strengthening local livelihoods and economies that rely heavily on natural resources.

**Project design**

The theories of change for both Deegan Bile projects established their core objectives, which are to use climate change adaptation and strengthened local conflict resolution mechanisms to reduce the risk of maladaptation and the incidence of conflict and displacement (see box 3.2). Both projects also identified as entry points to reducing conflict (a) investing in infrastructure, (b) supporting natural resource management in a manner that includes different groups in the community (e.g. host and displaced groups, majority and minority clans, women and youth) in related decision making, and (c) boosting the participation of women in local conflict resolution.

The emphasis on locally driven natural resource management in Deegan Bile project design corresponds to local peacebuilding approaches that emphasize the importance of local participation, ownership and governance to achieving peace outcomes.<sup>60</sup> Local peacebuilding approaches are sometimes critiqued as lacking gender-sensitivity, leading to the exclusion of women from peacebuilding programmes and the reinforcement of patriarchal dynamics when peacebuilding actors engage with (typically male) local authorities.<sup>61</sup> In its conflict analysis, IOM highlighted that while women are socio-economically and politically marginalized in rural Somali communities, they have important peacebuilding roles by virtue of their greater mobility and ease of communi-

<sup>60</sup> Brinkerhoff, D. W., ‘State fragility and governance: Conflict mitigation and subnational perspectives’, *Development Policy Review*, vol. 29, no. 2 (Mar. 2011); Leonardsson, H. and Rudd, G., ‘The “local turn” in peacebuilding: A literature review of effective and emancipatory local peacebuilding’, *Third World Quarterly*, vol. 36, no. 5 (2015); Richmond, O. P. and Mac Ginty, R., ‘Where now for the critique of the liberal peace?’ *Cooperation and Conflict*, vol. 50, no. 2 (2015); and Ljungkvist, K. and Jarstad, A., ‘Revisiting the local turn in peacebuilding: Through the emerging urban approach’, *Third World Quarterly*, vol. 42, no. 10 (2021).

<sup>61</sup> Pratt, N., ‘Reconceptualizing gender, reinscribing racial–sexual boundaries in international security: The case of UN Security Council Resolution 1325 on “Women, Peace and Security”’, *International Studies Quarterly*, vol. 57, no. 4 (Dec. 2013); Hudson, H., ‘Decolonising gender and peacebuilding: Feminist frontiers and border thinking in Africa’, *Peacebuilding*, vol. 4, no. 2 (2016); and Rigual, C., ‘Rethinking the ontology of peacebuilding. Gender, spaces and the limits of the local turn’, *Peacebuilding*, vol. 6, no. 2 (2018).

**Box 3.2. Theories of change for addressing climate change and conflict**

The theories of change established for the Deegan Bile projects in Galmudug and Hirshabelle identify climate change adaptation and local conflict resolution mechanisms as means of reducing both community vulnerability to climate change and the incidence of violent conflict.

For the Deegan Bile project in Galmudug, the theory states: ‘If target populations in Galmudug are provided with climate-adaptive awareness, techniques and capacity, and social and physical infrastructures are strengthened, then forced displacement and conflict due to environmental factors will be reduced, because negative coping strategies to environmental variability, which perpetuate the climate-conflict cycle, are replaced by sustainable alternatives and local conflict resolution mechanisms.’<sup>a</sup>

For the Deegan Bile project in Hirshabelle, the theory states: ‘If target populations in Hirshabelle are provided with climate-adaptive awareness, techniques and capacity, and social and physical infrastructures are strengthened, then conflict due to environmental factors will be reduced, because negative coping strategies to environmental variability, which perpetuate the climate-conflict cycle, are replaced by sustainable alternatives and local conflict resolution mechanisms.’<sup>b</sup>

<sup>a</sup> IOM, ‘Description of action: Breaking the climate-conflict cycle in Galmudug, Somalia’, Unpublished project document, n.d.

<sup>b</sup> IOM, ‘Description of action: Breaking the climate-conflict cycle in Mataban District, Somalia’, Unpublished project document, n.d.

cation across clan conflict lines. Therefore, bringing women into local decision making on natural resource management can create opportunities for their empowerment in community affairs while supporting conflict reduction. Peace research has identified a positive correlation between women’s participation in peace agreements and the sustainability of peace outcomes, which could be linked to the positive effects of collaboration and knowledge exchange between different groups of women.<sup>62</sup>

The two Deegan Bile projects differ slightly in intended outcomes, reflecting the different contexts in the two locations. In Galmudug, the project design placed an emphasis on knowledge-sharing, training (e.g. on climate change, water sharing and early warning systems) and resilience-building, while in Hirshabelle, the project was more directly based on the aim of peacebuilding through the development of local peace agreements and the roll-out of inter-community activities.

In Galmudug, project activities were implemented in five geographically and socio-economically diverse rural areas, though in all areas, migratory pastoralism is the economic cornerstone and many communities were strongly impacted by the record-breaking drought in 2021–23. In contrast, in Hirshabelle, project activities were implemented in areas close to the politically contested Mataban District, reflecting the project’s aim of peacebuilding in seeking to address a political clan conflict affected by local conflict over natural resources.

The Deegan Bile projects were both based on a conflict analysis that highlighted the relationships between climate change, environmental degradation, conflict and weak governance, and that defined the following entry points for addressing these challenges: (a) local dialogue and natural resource management; (b) infrastructure that supports resilience to climate change and makes a contribution to peacebuilding; and (c) the strengthening of the role of formal authorities in providing services to the community. As such, both projects sought to improve horizontal relationships between communities and vertical relationships between communities and the authorities through natural resource management and climate action.

<sup>62</sup> Krause, J., Krause, W. and Bränfors, P., ‘Women’s participation in peace negotiations and the durability of peace’, *International Interactions*, vol. 44, no. 6 (2018).

The Deegan Bile projects aimed to promote long-term resilience to the adverse effects of climate change and to support local institutions already considered to be credible to become more inclusive; as such, their aims extended beyond reducing direct violence (sometimes called ‘negative peace’) to addressing structural forms of violence.<sup>63</sup> Because the Deegan Bile projects sought to bridge the gaps between rural development and political peace processes, they also aimed to expand the scope of peacebuilding beyond elite politics to include community-level dialogue.

In the conflict analysis for the Deegan Bile projects, IOM identified the effects of climate change as a driver of both violent conflict and forced displacement and, as such, pinpointed climate change adaptation as an entry point to building local resilience to climate variability, conflict and forced displacement. The projects were therefore designed to support environmental peacebuilding by building bridges between communities living in conflict and by strengthening relationships between communities and the state.

<sup>63</sup> Galtung, J. and Fischer, D., ‘Positive and negative peace’, *Johan Galtung: Pioneer of Peace Research*, Springer Briefs on Pioneers in Science and Practice no. 5 (Springer: Berlin, 2013).

## 4. Opportunities of the environmental peacebuilding approach

The design and implementation of the Deegan Bile projects sought to contribute to three aspects of environmental peacebuilding: (a) the development of shared mechanisms and norms for different groups in the community to jointly manage natural resources; (b) collaboration by parties in conflict on mutually beneficial projects, thereby improving inter-clan relationships; and (c) the strengthening of state service provision and fostering of community trust in authorities.<sup>64</sup> The findings presented in this chapter are derived from various sources: information provided by IOM staff; the final narrative report of the Galmudug project, prepared by IOM; and data collected from perception surveys (see table 4.1) and focus group discussions (see table 4.2), which were designed by SIPRI and conducted by Somali researchers in IOM target locations (see box 4.1 for further details).

### Natural resource management

In countries experiencing violent conflict, the effects of climate change on natural resources (e.g. water and pastures) strain local mechanisms for managing community access to those resources and for resolving local conflicts over access. When livelihoods are closely linked to natural resources and alternative livelihood options are limited, the risk of tension and conflict increases in communities affected by climate change.<sup>65</sup>

Environmental peacebuilding research suggests that the promulgation of norms for community management of the environment and of natural resources is one way for international actors to make progress in environmental peacebuilding in post-conflict contexts.<sup>66</sup> Therefore, in the newly recovered territories of Galmudug and Hirshabelle, the Deegan Bile projects could support sustainable natural resource management as a means of reducing the incidence of conflict. In designing the projects, this observation was framed as the aim to align existing norms with communities' expectations of governance by injecting knowledge and capacity into existing, credible local natural resource management institutions in the target communities.<sup>67</sup>

### *Locally legitimate natural resource management*

The aim of the Deegan Bile projects was, ultimately, to reinforce the potential for natural resource management committees to reduce the incidence of local conflicts over resources such as fresh water and pastures. The projects used community dialogues to build consensus for strengthened local natural resource management. These dialogues were facilitated by convening members of the community in natural resource management committees (or working with existing natural resource management committees), which served as a platform for discussion on shared challenges and decision making on joint responses. These committees were provided with training focused on sustainable natural resource management practices that can improve ecosystem health and resilience to climate change, where a transfer of knowledge and norms took place. This transfer offered an entry point to and could inform the subsequent community-level dialogue on how to promote climate-sensitive natural resource management and how

<sup>64</sup> Krampe, Hegazi and VanDeveer (note 13).

<sup>65</sup> Buhaug et al. (note 21); and Mobjörk, M., Krampe, F. and Tarif, K., 'Pathways of climate insecurity: Guidance for policymakers', SIPRI Policy Brief, Nov. 2020.

<sup>66</sup> Krampe, Hegazi and VanDeveer (note 13).

<sup>67</sup> Ljungkvist and Jarstad (note 60); Leonardsson and Rudd (note 60); and Mac Ginty R. and Richmond O. P., 'The local turn in peacebuilding: A critical agenda for peace', *Third World Quarterly*, vol. 34, no. 5 (2013).

**Table 4.1.** Perception survey data responses

	Number	Percentage of total responses
<i>Federal Member State</i>		
Galmudug	377	48.7
Hirshabelle	396	51.2
<i>Gender</i>		
Female	383	49.5
Male	390	50.4
<i>Age</i>		
Youth (18–24)	48	6.2
Adult (25–59)	628	81.2
Senior citizen (60+)	97	12.5
<i>Location</i>		
Afbarwaaqo	78	–
Beer-Gadid	50	–
Bilcil	41	–
Buqaloc	36	–
Cardo	45	–
Duqaqo	42	–
Hobyo	56	–
Mataban	129	–
Merqasim	51	–
QodQod	52	–
Qofey	49	–
Qoryoweyne	39	–
Saaqiro	40	–
Takaraale	65	–

to develop community-led action plans for addressing those aims. The transfer of knowledge and norms also lends itself to the development of a locally accepted governance structure for the resolution of disputes that prevents their escalation into violence and political spillover effects. In its final narrative report on Deegan Bile Galmudug, IOM found that the natural resource management committees brought about a reduction in the number of conflicts in the Deegan Bile projects' target areas. The report suggests that the incidence of conflict was reduced because local natural resource committees were able to respond more quickly to disputes and conflicts than formal governance structures.

IOM also found that the Deegan Bile Galmudug project contributed to more inclusive management of water, land and forestry resources. While male clan and village elders remained the preferred means of resolving community-level disputes, the natural resource management committees supported by the project facilitated an increase in the participation of women and young people in local decision making. In its final evaluation of Deegan Bile Galmudug, the IOM noticed a shift from individual to community-based management of water, land and forestry resources.<sup>68</sup> This trend appears to be linked to women's increased participation in decision making. For example, in

<sup>68</sup> IOM, 'Reducing climate-induced conflict in Galmudug', Unpublished final narrative report, Dec. 2023.

**Table 4.2.** Focus group discussion locations and number of participants

	Female	Male
<i>Galmudug</i>		
Afbarwaaqo	6	8
Beer-Gadid	3	8
Hobyo	7	7
<i>Hirshabelle</i>		
Mataban	6	5
QodQod	6	6
Qoryoweyne	6	7

Bilcil and Hobyo, women were found to play a stronger role in the management of water resources when communities had selected kitchen gardening as a project activity.<sup>69</sup> In Duqaqo, women who had participated in environmental peacebuilding training under the Deegan Bile project approached their village leaders with a proposal to use a piece of land to establish a communal farm with a drip irrigation system (which can save water and nutrients). When the leaders resisted the idea, the women staged a peaceful demonstration that pressured the leaders into designating a portion of land for the farm.<sup>70</sup>

In the case of the Deegan Bile Galmudug project, an increase in women's participation in local natural resource management might also translate to stronger decision-making roles in other local social, economic and political affairs. However, evaluating and attempting to understand the longer-term impact of more robust participation of women in community-led natural resource management is challenging in a short project period of 18 months.

#### *Local perceptions of natural resource management*

The perception surveys conducted in Galmudug and Hirshabelle found that respondents were generally positive about the health of natural resources in their areas. Responses from people who identified livestock as their primary source of income showed optimism regarding the health of pastures: 46 per cent said they were in 'good' health and 42 per cent said they were 'improving'. These overall positive responses could be linked to the very severe drought Somalia experienced in 2021–23. Rainfall recovered in 2023 as a result of an El Niño event, which warmed Pacific Ocean temperatures and increased rainfall in the Horn of Africa. By the time the surveys were carried out in January 2024, it is likely that water, pastures and other natural resources had recovered to some extent.

Survey respondents in Galmudug and Hirshabelle were also mostly positive about local natural resource management, with 76 per cent saying that the community works together in sharing resources and 68 per cent agreeing that their community is getting better at managing resources together. People in Hirshabelle had more positive responses to both questions than those in Galmudug, which may indicate that natural resource management is stronger in Hirshabelle or that natural resources are more plentiful, making collaboration easier. The survey results on natural resource management support the IOM conflict analysis that informed the Deegan Bile projects, which

<sup>69</sup> Kitchen gardening refers to small-scale vegetable, fruit and herb farming, in which women traditionally play a strong role. IOM (note 68).

<sup>70</sup> IOM (note 68).

**Box 4.1. The role of SIPRI as a research partner in the Deegan Bile projects**

As a research partner to IOM and UNEP on the Deegan Bile projects in Galmudug and Hirshabelle, SIPRI's role was to explore the conflict analysis of the IOM and its approach to conflict reduction in target locations in order to identify lessons for peacebuilding and climate change adaptation applicable to other fragile and conflict-affected areas.

This entailed conducting a literature review of Somalia's country context and of IOM projects in Somalia. SIPRI staff also engaged in regular discussions with IOM Somalia staff and participated in their internal and external meetings. The research partnership fostered a more participatory and bilateral working relationship throughout the project cycle than comparable partnerships. The benefits of this close collaboration include two-way learning and information-sharing; the drawbacks include potentially less objective project assessments due to the proximity of the researcher to the implementing team. This concern has been mitigated by SIPRI's peer review process, which ensured that internal and external feedback was provided on the findings presented in this paper.

Another challenge to the partnership relates to the time frames for project implementation, monitoring and evaluation, and learning through research. While implementation of the Galmudug project concluded in June 2023, and IOM had conducted a final evaluation and prepared a narrative report on the project outcomes, the Hirshabelle project concluded in February 2024 and the IOM evaluation and report were pending at the time of preparation of this paper. This discrepancy made it easier to identify lessons learned from Galmudug than from Hirshabelle.

SIPRI complemented its research with perception surveys and focus group discussions, carried out in January 2024, to explore how target communities perceive the effects of climate change; the health of natural resources and the effectiveness of their management; and the relationships among clans and between clans and formal authorities. The aim of doing so was to facilitate a better understanding of the relevance of the IOM conflict analysis and its approach to conflict reduction to the lived experiences of people in Galmudug and Hirshabelle. While IOM and other organizations active in Somalia collect data for the purpose of humanitarian, development and peacebuilding actions, including perceptions regarding the nexus of climate change, natural resources, and inter-clan and government relationships, this data has not been published. Therefore, the data from this research can serve a broader purpose.

SIPRI worked with a Somali partner organization, Elman Peace, to design and deploy the perception surveys.<sup>a</sup> The surveys utilized the following multi-stage sampling method: (a) stratified sampling, to collect data in IOM target communities in Galmudug and Hirshabelle; (b) quota sampling, to ensure a balance in female and male respondents from each location; and (c) random sampling, to give every adult female and male from the target locations an equal chance of being selected as a survey respondent. The surveys captured insights from more than 700 respondents using a series of yes or no, single answer, multiple choice, and open-ended questions designed in consultation with researchers at Elman Peace and deployed in Somali using the KoboToolbox data collection tool. See table 4.1 for more details.

Elman Peace also convened the focus group discussions, bringing together small groups of men and women to discuss six broad topics: weather changes, environmental degradation, community relationships, the local government, security in the community and the Deegan Bile projects. Six group discussions were convened, three in Galmudug and three in Hirshabelle. See table 4.2 for the locations and number of female and male participants at each.

The short timeline for implementing the Galmudug and Hirshabelle projects (18 months) posed a challenge for identifying the positive impacts on natural resource management, cross-clan relationships and community perceptions of formal authorities.

<sup>a</sup> Elman Peace is a non-profit organization founded in 1990 and based in Mogadishu, Somalia, with offices countrywide. It promotes peace and supports empowerment and leadership among marginalized groups. For more information, see <<http://elmanpeace.org>>.

pointed to the credibility of local natural resource management institutions and their potential to serve as the foundation for formal governance structures.

Focus group discussion participants were generally less positive about natural resource health and management, more closely reflecting previous findings regarding



perspectives on environmental degradation in Somalia.<sup>71</sup> Participants in the Deegan Bile target locations were aware of changing weather patterns and their impacts on the environment, including natural resources, and on human activities. They demonstrated a strong awareness of how increasing temperature and declining rainfall affect local ecosystems, as well as animal and human health. Many also showed an awareness of natural resource management practices that are damaging and should thus be avoided; however, participants also noted that their capacities to adapt are limited and that they are more concerned with survival than with managing resources sustainably. For example, in Beer Gadid, people spoke of the desperation of livestock herders, who had resorted to cutting down trees in order to use foliage as animal fodder, despite knowing that this practice leads to soil erosion. People also reported that despite their attempt to collaborate on a community rainwater harvesting system, its lack of success led to many people being displaced. Environmental peacebuilding approaches can identify and then build on existing efforts to improve local natural resource management and local resilience to drought, and in supporting those efforts can contribute to better relationships between different groups in a community. The findings of the focus group discussions overall indicate that, as posited by other environmental peacebuilding research, the diffusion of norms around the environment and natural resource management, especially nature-based solutions, can support communities in making decisions that will lead to more sustainable outcomes.

In both Galmudug and Hirshabelle, a slight majority of perception survey respondents reported that they are not concerned with tensions around natural resources in their community, and of those that did express concerns (40 per cent), most (81 per cent) believe that their concerns are being addressed (primarily by clan elders). These responses confirm the legitimacy of traditional authorities in local natural resource management and in addressing related tensions. People surveyed in Hirshabelle were more positive on this matter than those in Galmudug, and women were slightly more positive than men. Participants in the focus group discussion in Beer Gadid noted that sharing between clans is constrained by resource scarcity and that water scarcity in particular strains even the strongest of community bonds, agreeing that ‘Sharing becomes challenging when there’s not much to share’.<sup>72</sup>

A slight majority of perception survey respondents reported conflicts in their community in the past year—either ‘sometimes’ (41 per cent) or ‘often or always’ (27 per cent). Overall, most people in the Deegan Bile project target locations indicated that when conflicts arise in their community, they are primarily between different pastoral groups, between different farming groups, or between pastoralists and farmers. In Galmudug, respondents pointed more consistently to conflicts involving pastoralists and farmers, but also to conflicts with displaced people. In Hirshabelle, respondents indicated more diverse types of local conflict; although many also pointed to conflicts between farmers and pastoralists, they highlighted conflicts involving Somali Government forces. Since August 2022, the Somali Government’s military operations against Al-Shabaab have led to an increase in the occurrence of conflict in both Galmudug and Hirshabelle; the survey responses may indicate that government forces are more visible in areas of Hirshabelle than of Galmudug.<sup>73</sup>

When asked about issues driving conflict, half of the perception survey respondents pointed to access to water. Access to pastures and other land as well as clan identity were also noted. These responses confirm the Deegan Bile projects’ emphasis on nat-

<sup>71</sup> Jama et al. (note 28).

<sup>72</sup> Participant in a focus group discussion, Beer Gadid, Somalia, 29 Jan. 2024.

<sup>73</sup> For data on the number and fatalities of conflict events in Somalia in 2022, see the Armed Conflict Location and Event Data Project (ACLED) website, <<https://acleddata.com/dashboard/#/dashboard>>.

ural resource management as a means of reducing the incidence of local conflicts. One experience shared in the Beer Gadid focus group discussion highlights the convergence of conflict issues: a livestock herder explained that, historically, he undertook seasonal migration, moving his animals between different grazing areas, but that recently, he had been unable to find pastures without confronting armed livestock herders from other clans, who were similarly hard-pressed in sustaining their animals. Other participants pointed out that men had recently received weapons from the Somali Government in order to join military operations against Al-Shabab, which increases the risk that confrontation between herders will escalate to violence. This anecdote supports the conflict analysis of IOM as well as the aim of the Deegan Bile projects to address both the pressures of climate change on natural resource availability and the clan divides that prevent shared natural resource management during times of scarcity by situating those dynamics in the broader conflict context.

### Cross-clan collaboration

Clan affiliations inform social, economic and political structures in Somalia, and clans are a source of identity, social capital, financial support, conflict resolution and more. As such, clan affiliations are important to the resilience of clan members. Clan affiliations also often frame conflicts over natural resources in Galmudug and Hirshabelle, and local capacities to manage tensions between clans are limited by the absence of shared mechanisms for managing these resources and resolving related disputes. Clan elders resolve conflicts with other clans and manage the distribution of financial compensation for injury caused to the members of other clans or damage done to their property. Indigenous mechanisms for resolving land disputes, such as *xeer*, and other dispute resolution mechanisms can empower local communities through access to justice, but they can also reinforce structural inequalities by favouring stronger clans.<sup>74</sup>

The Deegan Bile projects aimed to improve local water infrastructure and increase the efficiency of water and energy use in the agropastoral sector while fostering cross-clan collaboration on projects that would have immediate, tangible benefits for the community. The validity of this approach is supported by findings from research on environmental peacebuilding that suggest natural resource management can serve as the basis for improving interaction and collaboration between groups living in conflict and can support peace outcomes by reducing intergroup biases and building relationships of trust.<sup>75</sup> Taking these findings a step further, IOM staff saw the Deegan Bile projects as an opportunity to link the outcomes of intergroup trust-building with collaboration on specific projects aimed at creating benefits that could be shared by both groups or on the resolution of specific conflict issues.<sup>76</sup> This approach echoes research on the potential for infrastructure projects to support peacebuilding when they create shared interests for parties in conflict and when they can be used by parties in conflict in ways that support positive interaction between groups in the community.<sup>77</sup>

<sup>74</sup> International Development Law Organization (IDLO), *Strengthening Climate Justice in Somaliland: The Role of ADR Centres*, Issue Brief (IDLO: Rome, Mar. 2023); and Schlee, G., 'Customary law and the joys of statelessness: Idealised traditions versus Somali realities', *Journal of Eastern African Studies*, vol. 7, no. 2 (2013).

<sup>75</sup> Krampe, Hegazi and VanDeveer (note 13).

<sup>76</sup> IOM staff, workshop on Deegan Bile projects, Nairobi, 27 Sep. 2023. The benefits of linking dialogue and trust-building to collaboration on specific joint actions is also supported by research on the implementation of peace agreements: Colchester, F., Henao Izquierdo, L. and Lustenberger, P., *Implementing Peace Agreements: Supporting the Transition from the Negotiation Table to Reality*, Discussion Points of the Mediation Support Network (MSN) no. 10 (MSN: 2020); and Ramsbotham, A., *Implementing Peace Accords Sustainably: Alternative Avenues to Bypass Blockages and Mitigate Resistance* (Conciliation Resources: London, Apr. 2022).

<sup>77</sup> Bachmann and Schouten (note 15); Fantini et al. (note 16); and van Tongeren et al. (note 16).

### *The matching grant approach for collaboration among clans*

A key component of the Deegan Bile projects was the use of the matching grant approach.<sup>78</sup> This approach was designed to facilitate community ownership of joint actions and incentivize intergroup collaboration for broader community benefit.<sup>79</sup> By emphasizing the development of community-led projects that advance climate change adaptation, the Deegan Bile projects demonstrate how climate action can be used to support peacebuilding in fragile and conflict-affected areas.

In the matching grant approach, local natural resource management committees and dedicated community implementation units formed by IOM take part in a dialogue facilitated by technical specialists aimed at defining community priorities for adapting to the effects of climate change and developing action plans to address those priorities. IOM supports units in outlining the project budget, aims and expected benefits, which are published on a public crowdfunding platform, Sokaab.<sup>80</sup> Once the project has reached its funding goal, IOM matches the community-raised funds on the basis of a ratio system: IOM contributes more to a project when it has a wider geographical scope, a more diverse group of collaborators or broader community benefits.<sup>81</sup> The implementation of the project is then carried out by local businesses, which has the added value of strengthening the local economy, and the outcome is a wholly community-owned infrastructure or service. The matching grant approach can, therefore, support climate action that is tailored to the needs of local communities; enhance communities' access to technical information and training to develop skills for implementing climate action; and facilitate participation in decision making around local climate action.<sup>82</sup> This can, in turn, mitigate the risk of maladaptation, which can include an increased risk of insecurity and conflict.<sup>83</sup>

Application of the matching grant approach yielded various results across Galmudug, indicating the context-specific nature of project design and implementation and reflecting the different social, economic and political realities of local communities. In Bilcil, the community's selection of a water infrastructure project—a borehole and drip irrigation system for a local farm—was found to increase access to water and support the return of households who had been displaced to nearby Abudwaq because of water scarcity. In Hobyo, communities agreed on shared land for sand dune stabilization projects (this land management practice prevents the erosion and encroachment of sand dunes in coastal and desert environments), and in Buqaloc and Qoryoweyne, two pastoralist groups engaged in joint fundraising for two community multipurpose centres where local businesswomen, among others, were allocated space for marketing local produce.<sup>84</sup>

<sup>78</sup> IOM, 'Matching Grant IOM Somalia overview', 18 Oct. 2022.

<sup>79</sup> Krampe, F., 'Ownership and inequalities: Exploring UNEP's Environmental Cooperation for Peacebuilding Program', *Sustainability Science*, vol. 16 (2021).

<sup>80</sup> See the Sokaab website, <<https://www.sokaab.com>>.

<sup>81</sup> From 2021 to 2022, target communities raised a total of \$350 000 as part of the Deegan Bile projects, primarily from family and clan networks, which was subsequently matched by IOM. IOM staff, workshop on Deegan Bile projects, Nairobi, 27 Sep. 2023.

<sup>82</sup> Ben-Shmuel and Halle (note 17).

<sup>83</sup> Schipper, E. L. F., 'Maladaptation: When adaptation to climate change goes very wrong', *One Earth*, vol. 3, no. 4 (Oct. 2020); Swatuk, L. A. et al., 'The "boomerang effect": Insights for improved climate action', *Climate and Development*, vol. 13, no. 1 (2021); and Dabelko, G. D. et al. (eds), *Backdraft: The Conflict Potential of Climate Change Adaptation and Mitigation*, Environmental Change and Security Program Report vol. 14, no. 2 (Woodrow Wilson International Center for Scholars: Washington, DC, 2013).

<sup>84</sup> IOM (note 68).

### *Local perceptions of relationships among clans*

The environmental peacebuilding literature suggests that the matching grant approach offers an example of how climate action can be used as a platform for interaction, dialogue, trust-building and peacebuilding between groups living in fragile and conflict-affected areas. But community perceptions of the relationships between different clans in Galmudug and Hirshabelle reveal how embedded clan divides are and indicate the importance of providing opportunities for collaboration that leads to shared benefits.

Most perception survey respondents in Galmudug and Hirshabelle reported that people in their community live together peacefully and that they would be happy living next door to a person from a different clan. Respondents also reported being optimistic about relationships between different clans in their community: a combined 85 per cent ‘agreed’ or ‘strongly agreed’ with the statement ‘Relationships between different clans in my community are better than they were in the past’. It is impossible to attribute the optimism that came across in these survey responses to one specific factor—including to the positive impact of the Deegan Bile projects—but the trend is notable and somewhat unexpected given the recent drought and ongoing military operations that affect communities in Galmudug and Hirshabelle.

While focus group discussions highlighted the importance of clan affiliations as a source of identity, social capital and support, they also confirmed that support stays within the clan. The discussions indicated that examples of cross-clan support and collaboration are rare. Participants expressed an understanding of and empathy for other clans experiencing the same hardships as their own, but they also highlighted that communicating across clan divides is challenging because it can be perceived as culturally inappropriate and because clans live in segregation, even in the same location. As one focus group discussion participant put it: ‘I have never had a man from a different tribe come to me seeking help. I don’t think I will ever see that.’<sup>85</sup>

This confirms the finding of the IOM conflict analysis that collaboration between clans should be based on actions that deliver tangible results benefiting both clans in order to overcome the deep divisions between them.

Perspectives on inter-clan relationships in Galmudug and Hirshabelle captured in perception surveys and focus group discussions seem to be in contrast to each other. Many survey respondents expressed the view that inter-clan relationships in their communities were better than they had been in the past. This may reflect a real reduction in tensions and conflicts between clans but participants in focus group discussions, in contrast, raised numerous examples of the physical segregation that clans continue to live under, which raises the possibility that people in Galmudug and Hirshabelle do not necessarily understand ‘better’ relationships with other clans to be the same as ‘closer’ relationships. In this context, approaches that create incentives for collaboration on tangible climate action that benefits both communities—such as the matching grant approach applied by IOM in the Deegan Bile projects—may be an important opportunity for clans to build not only relationships, but also shared physical spaces where they can regularly interact.

### **State–society relationships**

Despite political gains in recent years, Somalia’s governance systems remain contested. Political tensions and conflict limit the capacity of the authorities to establish formal institutions and services that would link the government with citizens, and the social contract in Somalia remains closely tied to traditional clan affiliations. Informal govern-

<sup>85</sup> Participant in a focus group discussion, Afbarwaaqo, Somalia, 28 Jan. 2024.

ance, including village, clan and religious leadership, continues to be the most trusted form of governance in rural areas.

State-building, which aims to build or restore government institutions, has become a central feature of ‘liberal peacebuilding’ strategies. But the approaches under this umbrella often exclude an analysis of the environmental challenges in post-conflict contexts.<sup>86</sup> Environmental peacebuilding theory suggests that formal authorities can improve their legitimacy by addressing environmental issues and providing services that address fundamental community needs, for example natural resource management. Service provision is expected to lead to increased community support for the authorities, including in the form of payment of taxes. State legitimacy in divided societies is also tied to the equitable delivery of services—especially in marginalized rural communities.<sup>87</sup>

The approach of the Deegan Bile projects of building relationships between informal and formal authorities can, therefore, contribute to improving the legitimacy of local government institutions by connecting them with existing informal governance mechanisms and through delivering services to the target community.<sup>88</sup> This approach is supported by research showing that external actors have supported responsive, effective governance mechanisms in Somalia by working in a context-specific manner with local municipalities and local customary, religious and business groups.<sup>89</sup>

#### *The role of the government in newly recovered territories*

The Deegan Bile projects were designed to strengthen relationships between communities, local authorities and FMS governments. IOM worked with local authorities to deliver projects based on the matching grant approach. The role of local governments was context-specific, but often involved selecting the project’s location. For example, under the Galmudug project, local authorities in Hobyo allocated land for the construction of soil bunds, a nature-based solution utilizing the contours of soil to reduce water run-off and soil erosion and support groundwater recharge.<sup>90</sup> This example highlights how local governments can play a role in managing natural resources and promoting the resilience to climate change of communities and ecosystems. Such an approach may be especially beneficial in rural communities where the presence of the state is limited or non-existent.

The Deegan Bile projects identified livestock markets as a location that provides the opportunity to connect livelihoods and economies across clan divides through the joint development of infrastructure projects that support climate change adaptation and provide shared benefits for different clans. But the Deegan Bile projects also envisaged livestock markets as an opportunity for furthering the government’s role in the provision of basic services and in tax collection.<sup>91</sup> Some communities in Galmudug chose to use their matching grant projects to improve livestock health services, so IOM collaborated with the Galmudug Ministry of Livestock to train members of rural pastoralist communities in animal health with the aim of improving access to livestock health services. This project was expected to have immediate tangible benefits for local communities, especially in the context of the drought being experienced at the time,

<sup>86</sup> Kostić, R., Krampe, F. and Swain, A., ‘Liberal State-building and environmental security: The international community between trade-off and carelessness’, eds R. Amer, A. Swain and J. Öjendal, *The Security–Development Nexus: Peace, Conflict and Development* (Anthem Press: London, 2012).

<sup>87</sup> Krampe, Hegazi and VanDeveer (note 13).

<sup>88</sup> Stepputat, F., ‘Pragmatic peace in emerging governscapes’, *International Affairs*, vol. 94, no. 2 (Mar. 2018).

<sup>89</sup> Menkhaus, K., ‘State failure, State-building, and prospects for a “functional failed State” in Somalia’, *Annals of the American Academy of Political and Social Science*, vol. 656, no. 1 (Nov. 2014).

<sup>90</sup> IOM (note 68).

<sup>91</sup> IOM staff, workshop on Deegan Bile projects, Nairobi, 6–10 Nov. 2023.

as well as to strengthen relationships between pastoralists, local veterinarians and the district-level state veterinary section.<sup>92</sup> While animal health was not the primary aim of the Deegan Bile projects, it provides an example of the importance of emphasizing community-led decision making and connecting communities with formal authorities and shows how flexible programming can support unintended positive outcomes.

Another potential unintended benefit of the Deegan Bile projects was the strengthening of informal intergovernmental dialogue and collaboration. IOM sought the participation of relevant line ministries in Galmudug and Hirshabelle in the planning, implementation and reporting of project activities by establishing an interministerial steering committee comprising both active and observer ministries. In practical terms, the committee coordinated line ministry input to the Deegan Bile projects and encouraged buy-in during implementation and support for future activities. More broadly, in Deegan Bile project target communities, the involvement of line ministries in joint planning and implementation of activities, and in decision making relating to the projects, contributed to intragovernmental dialogue, the building of interministerial working relationships and improved coordination on issues related to climate change and its impacts on political priorities. In this way, the Deegan Bile projects sought to contribute to political peacebuilding, that is, to the alignment of the interests of different groups in government around environmental and natural resource governance and even climate action priorities. The potential for climate action in other fragile contexts to contribute to political dialogue that improves political coherence and delivers concrete results to constituencies is important to recognize.

#### *Local perceptions of the role and performance of the state*

The perception surveys carried out in Galmudug and Hirshabelle suggest an even split regarding whether or not formal authorities are representative of the community, with some differences in perspective evident between respondents of different clans.

The Hawiye clan plays a major role in both Somali national and FMS politics. Political tensions between clans have played out in both Galmudug and Hirshabelle, sometimes leading to armed violence. Perception survey data suggests that self-identifying members of the Hawiye Habar Gidir and Hawadle sub-clans held generally positive views of government authorities in their areas (the Habar Gidir sub-clan is a dominant political force in Galmudug and the Hawadle sub-clan dominates the Hiran Administrative Region of Hirshabelle FMS). Self-identifying members of the Ayr sub-clan of the Habar Gidir sub-clan held less positive views of the formal authorities. Members of sub-clans of the Dir clan also held less positive views of the government.<sup>93</sup> Respondents who chose not to declare their clan affiliations reported more negative views of how representative the government is of them. One explanation for these results may be that respondents from outside the majority (dominant) clans preferred not to disclose their affiliation, and thus more members of minority clans may be represented in the ‘undeclared’ clan results.<sup>94</sup>

In Beer Gadid and QodQod, focus group discussion participants expressed the view that formal authorities continue to follow the traditional clan models, in which clan elders either act as brokers between governments and communities or become government representatives themselves. This view reflects the finding that in some areas, people primarily see formal authorities as an extension of the clan system rather than a

<sup>92</sup> IOM (note 68).

<sup>93</sup> These findings reflect political fault lines between the Sacad sub-clan of the Hawiye, the Ayr sub-clan of the Habar Gidir, and the Dir clan, which have defined Galmudug FMS since its establishment in 2015. See International Crisis Group (note 31).

<sup>94</sup> Mushtaq, N., ‘State-building amidst conflict: The urgency of local reconciliation’, eds Keating and Waldman (note 54).

body that represents all residents. One exception was in Mataban, where participants in the discussion noted the government's recent role in mediating clan conflicts, which showed them that—unlike the clan system—the government can protect all citizens. These findings are tightly linked to environmental peacebuilding theory, which recognizes the potential for formal authorities in divided societies to improve their legitimacy by delivering services in an equitable way.<sup>95</sup>

The findings of the focus group discussions strongly suggest that the primary role of the formal authorities in rural Galmudug and Hirshabelle is seen as being the provision of security. Many participants acknowledged that the government is effective in this role, but many also expressed a wish to see more proactive involvement from the government in conflict resolution and other services. Participants from urban areas, such as Mataban and Hobyo, seemed to expect more from the government in terms of service provision than participants in rural areas. In Hobyo, participants said that the government does not have the capacity to deliver services and expressed more confidence in receiving assistance from aid agencies in the case of a drought, flood or other disaster. They also reported that government presence rarely extends beyond the town. Focus group discussion participants in the rural area of Qoryoweyne said the lack of confidence in the government leads to feelings of abandonment and the need for self-reliance in the community.

Findings from the focus group discussions also suggest that many people do not expect the formal authorities to have a broader role than the provision of security in their community. In Afbarwaaqo and Mataban, participants spoke favourably of the government taking a proactive role in managing natural resources and preventing conflicts. However, perception survey responses showed that most people would first go to village leaders for resolution of a land dispute, with clan elders being the second choice and the district government the third.<sup>96</sup> This lack of clarity around the role of the government is an important opportunity for advancing community relationships with the state through the provision of services that can have a positive impact on local livelihoods and economies.

The findings from both perception surveys and focus group discussions suggest that people in Galmudug and Hirshabelle are open to government involvement in advancing effective natural resource governance, resolving local conflicts over natural resources and assisting communities in adapting to the adverse effects of climate change. These activities offer entry points for dialogue between communities and local formal authorities—and within government at all levels—on how formal authorities can expand their role through the provision of services in, for example, natural resource management. This finding is supported by previous research that identified examples where local governments successfully provided services (such as water, policing and the administration of land titles) to their constituencies in south-central Somalia, and research arguing for connecting state-building with addressing environmental concerns in fragile and conflict-affected countries.<sup>97</sup> The potential impacts of this approach to furthering the provision of government services in the area of natural resource governance are particularly important in communities whose members do not feel represented or assisted in any way by the government.

<sup>95</sup> Krampe, Hegazi and VanDeveer (note 13).

<sup>96</sup> According to perception survey data, women were more likely than men to choose religious leaders and police officers for resolving such a dispute, suggesting that they may expect their claims to be treated more favourably by those arbiters.

<sup>97</sup> Menkhaus, K., *If Mayors Ruled Somalia: Beyond the State-building Impasse*, Policy Note no. 2 (The Nordic Africa Institute: Uppsala, 2014); and Kostić, Krampe and Swain (note 86).

## 5. Challenges of the environmental peacebuilding approach

As examples of environmental peacebuilding, the Deegan Bile projects in Galmudug and Hirshabelle offer lessons on three challenges or trade-offs of implementing such an approach. The first relates to the balancing of the interests of humans and nature in project design to avoid maladaptation; the second relates to the political sustainability of the project outcomes; and the third relates to limitations in monitoring and evaluation of the impacts of the projects on the natural environment and the target communities.

### Maladaptation risk: Balancing the interests of humans and nature

One challenge in designing the Deegan Bile projects in Galmudug and Hirshabelle was the imperative of balancing needs identified by the community and the need to take into account the effects of climate change.<sup>98</sup>

Human needs and priorities can be more immediate and experienced over a shorter term than the best practices in climate action can be aligned with. The Deegan Bile projects were implemented during and immediately after the most severe drought on record in Somalia, so the priorities of many communities revolved around access to water—not only drinking water but also water for agriculture and livestock.<sup>99</sup> The maladaptation risk here was that increasing access to water and concurrently improving social relations in the short term would contribute to the unsustainable use of groundwater, which exacerbates longer-term water insecurity. Conversely, creating new sources of water (e.g. boreholes and reservoirs) can fuel competition between groups desiring their control, in particular during dry seasons or under drought conditions, which constitutes another risk of maladaptation. Because tensions around water can be tied to how different groups use it (for livestock, agriculture or other purposes), the findings from the Deegan Bile projects raise the questions of whether cross-clan collaboration on natural resource management is easier to facilitate between groups who use natural resources in the same ways and whether it is more challenging to advance environmental peacebuilding in communities where different clans pursue different livelihoods.

The challenges for communities in balancing human and environmental interests were made clear during focus group discussions. Participants showed a strong understanding of changing weather patterns and their negative consequences for ecosystems and animal and human health. They cited the adverse effects of deforestation, soil erosion and declining vegetation cover in addition to the increasing severity of heat-related health risks for humans, such as heatstroke, dehydration and malaria. But communities also highlighted their limited capacities to adapt, even when they know what they should and should not do to protect the environment and the long-term security of their livelihoods. Participants in the Beer Gadid focus group discussion admitted that they are not attempting to adapt to changes in the climate—not because they are unconcerned about the environment, but because they are more concerned with their survival.

The focus on the livestock sector in the Deegan Bile projects presented both opportunities and risks for economic development. In the conflict analysis conducted to inform

<sup>98</sup> The challenges were discussed by IOM, UNEP and SIPRI staff on numerous occasions, which exemplifies how partnerships between organizations can support the identification and evaluation of challenges and trade-offs during implementation.

<sup>99</sup> IOM (note 50).



the Deegan Bile projects, IOM found that the livestock sector is the cornerstone of livelihoods, food security and trade in Galmudug and Hirshabelle, and recognized that the sector represents a credible institution for building good governance through climate action and for strengthening formal governance through the collection of taxes.<sup>100</sup> However, focusing on the livestock sector may be maladaptive in the long term, given the climate projections of increasing temperatures and more erratic rainfall, which pose challenges in terms of the availability and reliability of the resources—water and pasture—that are key to the sector.<sup>101</sup> Furthermore, Somalia is one of the fastest urbanizing countries in Africa, suggesting that in the long term, a greater emphasis on the diversification of livelihoods will be needed in urban centres in addition to rural areas, where migratory pastoralism remains the predominant lifestyle.<sup>102</sup>

Regarding the livestock sector, IOM observed the need to continue investing in credible institutions that already exist in Somalia's rural areas, the majority of which are oriented towards the predominant pastoralist livelihood, as a means of building the capacities of communities to work together peacefully in order to facilitate future economic and political transitions.<sup>103</sup> Forty-four per cent of perception survey respondents in Galmudug and Hirshabelle reported that their primary source of income is livestock, reflecting the predominance of a livelihood that relies on natural resources and is, therefore, sensitive to the effects of climate change. Furthermore, the survey indicated that 79 per cent of respondents received no education or Quranic education only, and that 76 per cent of respondents are in a low wealth index bracket. These socio-economic factors impact the capacities and options that people have for diversifying their livelihoods as a way of adapting to climate change, but opportunities to shift to alternative income sources are also defined by the predominance of pastoralism in the economies of Galmudug and Hirshabelle.

While implementing the Deegan Bile Galmudug and Hirshabelle projects, IOM recognized the need for longer-term strategies for addressing environmental degradation and improving the health of local ecosystems so that they can cope with the growing pressures of climate change. Both projects were designed to reduce conflict in target locations through investment in water infrastructure, improved efficiency of water and energy use in the agropastoral sector, dialogue and natural resource management.<sup>104</sup> But as implementation of the Galmudug project occurred first and could provide some lessons for the Hirshabelle project, IOM shifted from its emphasis on water infrastructure (such as boreholes and water reservoirs) towards nature-based solutions (such as rainwater harvesting) when implementing the Hirshabelle project. Nature-based solutions give greater consideration to ecosystem restoration and the feedback loops between ecosystem components to achieve the same goals of strengthening collaboration and reducing conflict between clans.<sup>105</sup>

<sup>100</sup> IOM staff, workshop on Deegan Bile projects, Nairobi, 27 Sep. 2023.

<sup>101</sup> Somali Ministry of National Resources, Somalia National Adaptation Programme of Action on Climate Change, Apr. 2013. Available at the United Nations Framework Convention on Climate Change website, <<https://unfccc.int/topics/resilience/workstreams/national-adaptation-programmes-of-action/napas-received>>.

<sup>102</sup> Halakhe, A. B. and Miller, S., 'No going back: The new urban face of internal displacement in Somalia', Refugees International, 25 May 2023.

<sup>103</sup> IOM staff, workshop on Deegan Bile projects, Nairobi, 27 Sep. 2023; and IOM staff, workshop on Deegan Bile projects, Nairobi, 6–10 Nov. 2023.

<sup>104</sup> IOM, 'As climate change strains Somalia's path to peace, communities hold the key', *The Storyteller*, 13 July 2022.

<sup>105</sup> IOM (note 68).

### Political challenges: Sustaining positive outcomes in the context of conflict

The Deegan Bile projects sought to improve the presence and strength of formal governance and state–society relationships in Galmudug and Hirshabelle FMS. In doing so, they also sought to address the disconnect between development and peacebuilding interventions in Somalia, where rural development projects are implemented without engaging in politics and where political peacebuilding processes focus on engaging with urban elites. As such, the projects recognized and strived to overcome one of the drawbacks of environmental peacebuilding approaches, that is, that they conceive of environmental problems as depoliticized or fail to recognize the political ecology that influences people’s experience of environmental problems.<sup>106</sup> Experience from environmental peacebuilding in Nepal and Sudan shows that successful local-level projects can be challenged when they seek to engage in fractious national-level politics.<sup>107</sup> This is also a risk in Somalia, where political rifts within each FMS and between the FMS governments and the Government of Somalia have often undermined local stability. As Galmudug is slated to hold elections in 2024, and as conflict with Al-Shabab continues in both Galmudug and Hirshabelle, the potential for local environmental peacebuilding initiatives to be subsumed or manipulated by more powerful actors is high.<sup>108</sup> Peacebuilding actors have previously identified challenges to community-based peacebuilding initiatives, which include engaging with formal authorities, working in contexts of high levels of insecurity and operating without legal frameworks.<sup>109</sup> But the broader risks identified in the environmental peacebuilding literature also speak to the potential for elites to manipulate initiatives in ways that reinforce marginalization—a particular risk in highly fragmented societies.<sup>110</sup>

In Galmudug and Hirshabelle, IOM engaged with government decision makers at the district and FMS level. The internal dynamics of the government became a factor in the ease of implementing the Deegan Bile projects. In the case of the Hirshabelle FMS government, it took several months of coordination to establish the interministerial steering committee (described in chapter 4), which significantly delayed the project’s launch. Nevertheless, the Deegan Bile projects’ support of district- and FMS-level government capacities is a core component of ensuring that longer-term formal governance can sustain the projects’ positive outcomes.

There are challenges here too. The capacity of the formal authorities to implement and run projects is impacted by the limited tax collection and revenue sources of the Somali Government. IOM has received requests from communities in Galmudug and Hirshabelle to implement matching grant projects in different localities; it aims to transition the matching grant project process to the FMS governments, but this may have mixed results. IOM does not foresee being able to evaluate the impact the Deegan Bile projects have had on government service delivery, which is a barrier to understanding the potential for the environmental peacebuilding approach to contribute to an improvement in formal governance.

<sup>106</sup> *Ide* (note 18).

<sup>107</sup> This experience was relayed by an IOM staff member at the workshop on Deegan Bile projects, Nairobi, 27 Sep. 2023. United Nations Environment Programme and European Union, *Climate Change and Security Partnership Project Final Report: March 2017–February 2022* (UNEP/EU: Sep. 2022).

<sup>108</sup> Armed Conflict Location and Event Data Project (ACLED), ‘Somalia: Al-Shabaab regains lost territories amid run-up to state elections’, Situation Update Mar. 2024, 28 Mar. 2024.

<sup>109</sup> Saferworld, Conflict Dynamics International (CDI) and Knowledge Platform Security and Rule of Law Secretariat (KPSRL), *Sustainable Community Approaches to Peacebuilding in Securitized Environments: Case Study of Somalia*, Learning Paper (Saferworld, CDI and KPSRL: Feb. 2020).

<sup>110</sup> *Ide* (note 18).

### Evaluation challenges: Capturing long-term changes in communities and the environment

Evaluation of the impacts of the Deegan Bile projects was, as for many peacebuilding projects, affected by the short duration of the project life cycles. While Somalia's civil war began over three decades ago, and climate change is measured over decades and centuries, IOM sought to reduce conflict and build climate resilience in specific areas of Galmudug and Hirshabelle, and evaluate the impacts of doing so, in just 18 months.

Some of the potential peace outcomes of the projects may not be evident for some time, so it is challenging to identify any shifting perceptions and behaviour—both of communities towards the environment and between communities—in the short time frame of a project's implementation period. This challenge applies when evaluating and attempting to understand the longer-term impact of more robust participation of women in community-led natural resource management. While the example from Duqaqo described in the subsection 'Locally legitimate natural resource management' above shows some evolution of women's roles in the community within the project period, it is impossible to plan for and fund a return to the same community in five to ten years to explore whether local women have been empowered to assume other responsibilities in the community. Similarly, the true impacts of training a group of women from different clans as community mediators may never be fully understood, especially when established indicators (the indicators used by IOM are defined by the project donor, the European Union) on women's participation and engagement focus on quantitative measurements such as the percentage of 'targeted women reporting access to tools to improve resilience to climatic shocks'.<sup>111</sup>

A recent review of monitoring and evaluation practices for environmental peacebuilding projects found that one key challenge to advancing this field relates to the traditional silos environmental projects and peacebuilding projects are placed in—theories of change focus on one but neglect identification of the potential outcomes, whether positive or negative, for the other (i.e. they have 'blind spots').<sup>112</sup> In the Deegan Bile projects, IOM aimed to address vulnerabilities to conflict and climate change in tandem, however, monitoring and evaluation for the projects focused on measuring conflict reduction using social, economic and political indicators. This restricted identification of the projects' impact on ecosystem health and understanding of the outcomes of the community-led, IOM-implemented project activities, for example, activities to improve soil and water quality, natural resource management and the sustainability of agropastoralism.

Furthermore, given the many humanitarian, development and peacebuilding initiatives under way in Somalia and the often-limited published information about these initiatives, distinguishing between the impact of IOM-led activities and other organizations' initiatives that may precede, overlap or follow them in the same target locations is difficult.

To fully assess environmental peacebuilding approaches, there is a need to monitor and evaluate both social and environmental project impacts. This is crucial to understanding both intended and unintended consequences of project implementation in local ecosystems and in local communities.

<sup>111</sup> IOM (note 68).

<sup>112</sup> Bruch and Woomer (note 22).

## 6. Lessons learned from the Deegan Bile projects

As climate change and conflict continue apace in Somalia, the need for robust responses that mitigate climate-related security risks has become urgent. Yet, while there is growing awareness of this need, few real-world examples showing how such responses can be designed, planned and implemented exist. The Deegan Bile projects offer a number of lessons for researchers, practitioners and policymakers with an interest in real-world examples of how climate change mitigation and adaptation can be designed and implemented to advance peacebuilding in fragile and conflict-affected areas. This chapter summarizes the three key lessons.

### **Lesson 1: Natural resource governance can support local peacebuilding**

The Deegan Bile projects were designed to address local conflicts in rural areas of Galmudug and Hirshabelle. The conflict analysis conducted by IOM found that these conflicts stem from the contested control of natural resources within segregated clan communities. To tackle this issue, the projects sought to strengthen local natural resource management as a tool for conflict prevention. This aim was intended to be achieved using two strategies: transferring knowledge and norms on environmental governance to community natural resource management structures and making natural resource management more participatory and representative through the inclusion of women and youth. The final narrative report on the Deegan Bile Galmudug project suggests that the potential for women to play a larger role in community decision making around natural resources is influenced by the types of environmental project that the community chooses to implement. If communities opt to pursue a project in a sector that already involves local women (e.g. kitchen gardening) there is more scope for women to participate in allocating resources to that activity (water in the case of kitchen gardening). This lesson is relevant to other gender-sensitive environmental peacebuilding processes in countries with a high level of gender inequality.

However, comprehensive understanding of the potential for environmental peacebuilding approaches to enhance the role of women in broader community decision making requires longer-term monitoring and evaluation of how their increased participation in natural resource management can lead to increased agency in other social, economic and political spheres. Similarly, to improve understanding of how natural resource management can support conflict reduction, environmental peacebuilding projects require time to assess the political sustainability of their outcomes. Environmental impact assessments should be conducted as part of these projects as a matter of course in order to analyse their impacts on local ecosystems and whether any unintended (positive or negative) consequences have arisen as a result of their implementation.

Over the 18-month implementation period of the project in Galmudug, IOM noticed both a reduction in the incidence of conflicts and a shift from individual to community-based management of water, land and forestry resources. This suggests that improved local natural resource management can surpass conflict reduction in terms of enhancing intra-community relationships and building communities' capacities for collaboration.

### **Lesson 2: Climate action can support peacebuilding**

The theories of change for the Deegan Bile projects in both Galmudug and Hirshabelle established the core objectives of the projects, namely, to use climate change adaptation and strengthened local mechanisms for conflict resolution to reduce reliance on nega-

tive coping strategies and the incidence of conflict and displacement. Both projects also identified investing in climate-smart infrastructure as an entry point to conflict reduction.

For the Deegan Bile projects, IOM placed an emphasis on infrastructure to demonstrate how climate action can be used to support peacebuilding in fragile and conflict-affected contexts. Further, its matching grant approach showed how mitigation and adaptation initiatives to combat climate change can be designed in ways that prioritize community ownership of the resulting infrastructure while anchoring intergroup collaboration in the tangible benefits they produce, thereby functioning as a platform for peacebuilding.

Application of the matching grant approach yielded various results in Galmudug, indicating the context-specific nature of project design and the flexibility needed in project implementation. Whether crowdfunding as a source of project funding would work as effectively in other countries and regions as it did under the Deegan Bile projects is unclear. However, IOM Somalia's Community Stabilization Unit has successfully used the matching grant approach to mobilize communities to work together across conflict lines and to connect with family and clan networks within Somalia and the Somali diaspora to crowdfund actions aimed at building resilience to climate change. This approach offers an important example of how the pressing need for climate change mitigation and adaptation in fragile and conflict-affected areas can be aligned with peacebuilding efforts and supported with improved access to financial resources.<sup>113</sup>

### **Lesson 3: Climate action can support the development of formal governance structures**

The conflict analysis conducted by IOM for the Deegan Bile projects found that various conflict dynamics feed into and exacerbate each other; for example, local-level clan conflicts can increase community vulnerabilities to exploitation by non-state armed groups, and rural clan conflicts can produce political spillover effects.

As it was operating in newly recovered territories, IOM identified the need to bridge rural development with political peacebuilding in order to support credible local institutions that can respond to the everyday needs of communities, with an emphasis on supporting local livelihoods and economies that rely heavily on natural resources.

In complex and fragile contexts, as in parts of south-central Somalia, formal authorities can improve their legitimacy through climate action by connecting with existing informal governance structures; the Deegan Bile projects contributed to building such vertical relationships. Formal authorities can also improve their legitimacy by delivering tangible benefits to local communities; the projects facilitated government involvement in improving natural resource management and local livelihoods, which may contribute to improving community understanding of the potential role of formal authorities beyond their provision of security.

One of the unintended consequences of the Deegan Bile projects appears to have been the creation of a space for informal intergovernmental dialogue and collaboration on issues related to climate change and its impacts on the national priority of political stabilization. This finding indicates the potential for climate action to bridge grassroots peacebuilding and political peacebuilding and foster alignment of the interests of competing groups with climate action priorities.

However, this paper identified the limited capacity of formal authorities to implement similar projects as a possible challenge to the sustainability of the positive

<sup>113</sup> Reda, D. and Wong, C., *Climate Finance for Sustaining Peace: Making Climate Finance Work for Conflict-affected and Fragile Contexts* (United Nations Development Programme: New York, 2021).

contributions to environmental peacebuilding of the Deegan Bile projects, and in this regard, highlights the importance of identifying and supporting methods to evaluate the political impacts of such projects and any long-term shifts in government service delivery in the areas of environmental and natural resource management and climate change mitigation and adaptation.

## 7. Conclusions

The IOM-led Deegan Bile projects implemented in Galmudug and Hirshabelle FMS, Somalia, offer valuable insights into how organizations with relevant mandates can work at the intersection of climate change, conflict and peacebuilding. The examples of environmental peacebuilding these projects constitute are crucial because, as climate-related security risks intensify in the country and elsewhere, there is a real need for iterative responses that facilitate action and learning in tandem.

This paper has examined the context, approach, implementation and outcomes of the Deegan Bile projects. It finds that the approach followed by these projects can support credible, inclusive local institutions for natural resource management, foster cross-clan collaboration on climate-smart infrastructure and nature-based solutions, and forge or strengthen relationships between formal authorities and rural communities through their joint design, planning and implementation of activities aimed at both climate action and conflict reduction. All these factors are essential to the success of climate action and peacebuilding initiatives.

However, the research also underscores the challenges to be navigated in applying environmental peacebuilding approaches. Policymakers and practitioners should carefully consider the need to delicately balance the interests of humans and nature in project design, the imperative to ensure the political sustainability of project outcomes, and the necessity to comprehensively evaluate both the social and the environmental impacts of a project, which is difficult given the short time frames of project implementation periods and the narrow indicators available.

As the global community grapples with the intertwined challenges of climate change and conflict, the Deegan Bile projects offer insights into both the challenges and the opportunities for designing and implementing responses that mitigate the impacts of climate change while also contributing to sustainable peace in fragile contexts.

## About the author

**Kheira Tarif** (Algeria/United Kingdom) is a Researcher in the SIPRI Climate Change and Risk Programme. She conducts research and policy advice on climate change, violent conflict and peacebuilding, working with governments, peace operations and multilateral organizations.







**STOCKHOLM INTERNATIONAL  
PEACE RESEARCH INSTITUTE**

Signalistgatan 9  
SE-169 72 Solna, Sweden  
Telephone: +46 8 655 97 00  
Email: [sipri@sipri.org](mailto:sipri@sipri.org)  
Internet: [www.sipri.org](http://www.sipri.org)