PEACE OPERATIONS AND THE CHALLENGES OF ENVIRONMENTAL DEGRADATION AND RESOURCE SCARCITY

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There is growing recognition in the United Nations Security Council and other regional security entities—such as the North Atlantic Treaty Organization (NATO), the Organization for Security and Co-operation in Europe (OSCE) and the African Union (AU)—that environmental degradation, the poor management of natural resources and the impacts of climate change are serious non-traditional security challenges facing many UN and non-UN multilateral peace operations.[1] These challenges have implications for the planning, execution and closure of peace operations. They shape everything from the rationale for a mission's deployment to its operational effectiveness and long-term legacy.[2] They are part of a set of interrelated and mutually reinforcing non-traditional security challenges that peace operations increasingly need to manage if they are to achieve their objectives.[3]

This paper investigates the non-traditional security challenges that environmental degradation and resource scarcity pose to multilateral peace operations, whether deployed by the UN or regional organizations such as the AU or the OSCE. It evaluates how these issues have been dealt with in peace operations and proposes some opportunities for improvement.

The paper is structured as follows. Section II briefly outlines how the international community's approach to these issues has evolved over the past 20 years or so—in particular, the UN Security Council. It

[1] On the SIPRI definition of multilateral peace operations, see van der Lijn, J. and Smit, T., 'Global trends and developments in peace operations', *SIPRI Yearbook 2018: Armaments, Disarmament and International Security* (Oxford University Press: Oxford, 2018), p. 103. See also the SIPRI Multilateral Peace Operations Database, <https://www.sipri.org/databases/pko/>.

[2] Waleij, A. et al., 'Environmental stewardship in peace operations: The role of the military', eds C. Bruch, C. Muffet and S. S. Nichols, *Governance, Natural Resources, and Post-Conflict Peacebuilding* (Earthscan: London, 2016), pp. 241–43.

[3] The related topics of irregular migration and human trafficking, organized crime, and terrorism and violent extremism are addressed, respectively, in van der Lijn, J., 'Multilateral peace operations and the challenges of irregular migration and human trafficking', SIPRI Background Paper, June 2019; van der Lijn, J., 'Multilateral peace operations and the challenges of organized crime', SIPRI Background Paper, Feb. 2018; and Smit, T., 'Multilateral peace operations and the challenges of terrorism and violent extremism', SIPRI Background Paper, Nov. 2017.

SUMMARY

● The third phase of the New Geopolitics of Peace Operations (NGP) initiative seeks to enhance understanding of how peace operations interact with non-traditional security challenges such as terrorism and violent extremism, irregular migration, piracy, organized crime and environmental degradation and resource scarcity. It aims to identify the various perceptions, positions and interests of the relevant stakeholders. By engaging key stakeholders and mapping the policy space for the potential role of peace operations in addressing non-traditional security challenges, it also aims to stimulate open dialogue, cooperation and mutual understanding.

Four dialogue meetings organized by SIPRI and the Friedrich-Ebert-Stiftung (FES) will focus on different non-traditional security challenges. Each will be preceded by a background paper that establishes a baseline for the meeting, giving an overview of the main developments and discussions regarding peace operations and the specific challenge to be discussed. The initiative will conclude with a final report based on the outcomes of these meetings. This will advance the discussion on peace operations and non-traditional security challenges.

This phase of the NGP initiative is supported by the Ministry of Foreign Affairs of the Netherlands and the Ministry for Foreign Affairs of Finland, co-sponsored by the Ministry of Foreign Affairs of Ethiopia, and conducted in continued partnership with the FES.

then categorizes activities that missions can undertake to prevent or respond to environmental degradation and resource scarcity. Based on this categorization, section III investigates some of the ways that peace operations have endeavoured to address these issues in practice. Section IV looks at the opportunities and challenges of incorporating a greater focus on environmental degradation, climate change and natural resource conflicts into the mandates and functioning of peace operations. Section V describes the extent of collaboration within and between peace operations, and also with other actors on these issues. Section VI concludes by outlining the implications for multilateral peace operations that are dealing with environmental degradation and natural resource scarcity.

For the purposes of this paper, 'resource scarcity' is understood to refer to tensions that arise over contested natural resources, whether renewable resources (such as water and timber) or non-renewable resources (such as land and minerals). Meanwhile, 'environmental degradation' is understood to refer to a host of issues stemming from the impacts of human activity that degrade the capacity of those resources to sustain healthy human lives, whether through pollution, poor management or the impacts of climate change.

I. Introduction

At least 40 per cent (and perhaps as high as 60 per cent) of the civil wars that have occurred since the end of World War II are linked to environmental degradation and natural resource (mis)management.[4] These links have manifested themselves in four main ways. First, violent conflicts can be triggered by disputes over scarce resources, such as fertile land and water. Second, tensions over environmental damage from large infrastructure and mining projects can lead to violent conflict, particularly in regions where the local population feels that it does not benefit from natural resource extraction. Third, conflicts can be prolonged by the looting and sale of high-value resources—such as gold, diamonds, oil or timber.[5] In fact, since 1990, at least 35 major conflicts have been partially financed by the exploitation of resources.[6] Fourth, the growing impacts of climate change are: compounding existing security challenges and creating new ones; exacerbating tensions over scarce resources, such as freshwater and arable land; triggering movements of people as a result of rising sea levels and increasingly ferocious storms; undermining government effectiveness; deepening food insecurity; and contributing to state fragility.[7]

Since 1945, 40–60 per cent of civil wars have been linked to environmental degradation and natural resource (mis)management

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[4] Matthew, R., Brown, O. and Jensen, D., *From Conflict to Peacebuilding: The Role of Natural Resources and the Environment* (UNEP: Geneva, 2009), p. 3.

[5] Rustad, S. A., Lujala, P. and Le Billon, P. 'Building or spoiling peace? Lessons from the management of high-value natural resources', eds P. Lujala and S. A. Rustad, *High-value Natural Resources and Post-conflict Peacebuilding* (Earthscan: London, 2012), pp. 571–621.

[6] Bruch, C. et al., 'The changing nature of conflict, peacebuilding, and environmental cooperation', *Environmental Law Reporter*, vol. 49, no. 2 (Feb. 2019), p. 10135.

[7] Rüttinger, L. et al., *A New Climate for Peace: Taking Action on Climate and Fragility Risks*, adelphi, International Alert, Woodrow Wilson International Center for Scholars and European Union Institute for Security Studies, 2015, pp. i–xix; and Mobjörk, M., Krampe, F. and Tarif, K., 'Pathways of climate insecurity: Guidance for policymakers', SIPRI Policy Brief, Nov. 2020.

All conflicts leave a trail of environmental destruction that compounds the human and economic costs of violence. Violent conflicts have direct impacts on the environment and a country's natural resources, in terms of unexploded ordnance, deforestation and damage to critical infrastructure. But they also have indirect impacts, in terms of the loss of environmental expertise embedded in communities and governance institutions if experts flee or are killed, the breakdown of institutions that manage the environment, and the resulting chaos as people try to cope in any way that they can.[8]

It is into these kinds of impoverished, fragile contexts that multilateral peace operations are typically deployed. As of December 2020, 10 of the 21 UN peace operations were located in countries deemed to be highly exposed to climate change.[9] Some of the biggest UN peace operations are located in such countries—including the UN–AU Hybrid Operation in Darfur (UNAMID), the UN Multidimensional Integrated Stabilization Mission in Mali (MINUSMA), the UN Mission in South Sudan (UNMISS), the UN Assistance Mission in Somalia (UNSOM) and the UN Organization Stabilization Mission in the Democratic Republic of the Congo (MONUSCO)—with the result that more than 80 per cent of the total of more than 92 000 UN peace operation personnel are operating in environments highly exposed to climate change.[10] Meanwhile, the legacies of conflict (such as the continued existence of armed groups, fragmented political systems, deep distrust and persistent social differences) can undermine a government's capacity to resurrect effective natural resource management (NRM) systems.[11]

At the end of 2020, 10 of 21 UN peace operations were located in countries deemed to be highly exposed to climate change

As well as navigating the difficult contexts in which they find themselves, multilateral peace operations must be mindful of their own environmental performance. Their relationship with the communities that they interact with is critical to their success. Once lost, credibility is difficult to regain.[12] This is particularly important given that missions can have considerable economic and environmental footprints in the areas they serve.

However, the environmental and natural resource challenges that peace operations face go well beyond the environmental performance and footprint issues that the peace operations themselves can control—that is, those 'inside the fence' (of the peace operation encampment itself). Indeed, 'outside-the-fence' challenges caused by resource scarcity and environmental degradation unrelated to a peace operation's own environmental performance may constrain the operation's ability to function effectively. Nevertheless, the

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[8] Sowers, J. L., Weinthal, E. and Zawahri, N., 'Targeting environmental infrastructures, international law, and civilians in the new Middle Eastern wars', *Security Dialogue*, vol. 48, no. 5 (Oct. 2017), pp. 410–30; and Weinthal, E. and Sowers, J., 'Targeting infrastructure and livelihoods in the West Bank and Gaza', *International Affairs*, vol. 95, no. 2 (Mar. 2019), pp. 319–40.

[9] Krampe, F., 'Why United Nations peace operations cannot ignore climate change', SIPRI Commentary, 22 Feb. 2021. See also Krampe. F., 'Climate change, peacebuilding and sustaining peace', SIPRI Policy Brief, June 2019.

[10] In terms of international personnel, as of 31 Dec. 2018. Smit, T. and van der Lijn, J. 'Peace operations and conflict management', *SIPRI Yearbook 2019: Armaments, Disarmament and International Security* (Oxford University Press: Oxford, 2019). See also Krampe 'Climate change, peacebuilding and sustaining peace' (note 9).

[11] Matthew, Brown and Jensen (note 4), pp. 15–17.

[12] Waleij, A., 'Crime, credibility, and effective peacekeeping: Lessons from the field', eds Bruch, Muffett and Nichols (note 2), pp. 207–21.

options for peace operation staff to address those challenges themselves may be limited and often require collaboration with a range of stakeholders inside and outside the relevant government.

Research suggests that civil wars with a strong natural resource link are significantly more likely to relapse into violence within five years than those without a strong natural resource link.[13] In part this is because the core root causes of tension related to competition for, or control over, natural resources may not have been resolved in the peace process. This can lead to lingering grievances that can erupt later.[14] Many developing countries have weak institutions and capacities for the management of land, water and other natural resources. During conflict, centralized systems for managing natural resources tend to break down. Multiple and diverse governance systems can emerge in their place, often dictated by those with military power. This creates a web of overlapping governance mechanisms (legal and illegal, traditional and modern), each with its own vested interests and stakeholders, which can complicate the resumption of effective NRM after the conflict.[15]

Civil wars with a strong link to natural resources are more likely to relapse into conflict within five years than those without a strong natural resource link

Reconciling these often contradictory systems can be a challenge. In virtually all post-conflict situations, NRM capacities are damaged or non-existent. At the same time, there are often high expectations that a government will be able to deliver a 'peace dividend' to its population in terms of the economic benefits of peace. There is considerable pressure to overuse natural resources and risk entering into poorly negotiated or one-sided deals that may appear to deliver those dividends but instead store up serious environmental challenges for the future. The capacity challenge can be daunting: violent conflict disrupts existing resource management mechanisms; multiple governance systems often complicate post-conflict situations; and legacies of conflict, which may not have been addressed during peace negotiations, may undermine new NRM mechanisms.[16]

II. Peace operations, environmental degradation and natural resource scarcity

The non-traditional security challenges of environmental degradation and natural resource scarcity have been present throughout the history of modern peace operations and have emerged in several stages.

[13] Matthew, Brown and Jensen (note 4), p. 5.
[14] Matthew, Brown and Jensen (note 4), p. 5.
[15] Bruch, C., Muffett, C. and Nichols, S. S., 'Natural resources and post-conflict governance: Building a sustainable peace', eds Bruch, Muffett and Nichols (note 2), pp. 1–30.
[16] Bruch, Muffett and Nichols (note 15).

Stages in the emergence of environmental degradation and natural resource scarcity on the agendas of peace operations

The role of peace operations in addressing conflict resources

A relatively early preoccupation was the illegal trade in conflict resources.[17] During the early to mid 1990s, the UN Security Council—mindful of the role of natural resources such as diamonds, timber and oil in funding the fighting in Angola, Cambodia, Liberia and Sierra Leone—began to impose sanctions on the exploitation of those resources in order to systematically address the specific threats to security associated with their exploitation.[18] It has been estimated that towards the end of the 1990s, the Revolutionary United Front—the rebels in the 1991–2002 Sierra Leone Civil War— was earning $25–125 million a year from the sale of conflict diamonds, while an estimated $1.25 billion worth of minerals was being looted from the eastern Democratic Republic of the Congo (DRC) annually by rebels and international networks.[19] These resources paid the salaries of rebel soldiers, altered the strategic objectives of the civil wars and prolonged the violence.

The Security Council has passed a growing number of resolutions that have addressed natural resource and other environmental issues

The UN Security Council began to introduce sanctions against the regimes regarding these resources under its Chapter VII powers, several of which were overseen or supported by peace operations (see section III).[20] In 1998, for example, the council adopted Resolution 1173, which endeavoured to prevent the insurgent group the National Union for the Total Independence of Angola (União Nacional para a Independência Total de Angola, UNITA) from using revenues from diamonds to fund the protracted 1975–2002 Angolan Civil War.[21]

Since the 1990s, the Security Council has passed a growing number of resolutions that have addressed natural resource and other environmental issues. By 2016, some 336 resolutions (14.4 per cent of the total) had addressed natural resources or the environment in some way.[22] Simultaneously, there was a recognition that the lack of capacity around natural resource governance was one factor behind the high rate of relapse of conflicts related

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[17] Global Witness, a London-based non-governmental organization, provides the following definition for conflict resources: 'Conflict resources are natural resources whose systematic exploitation and trade in a context of conflict contribute to, benefit from, or result in the commission of serious violations of human rights, violations of international humanitarian law or violations amounting to crimes under international law'; Global Witness, *The Sinews of War: Eliminating the Trade in Conflict Resources* (Global Witness: London, 2006), p. 10.

[18] Ravier, S. et al., 'Environmental experiences and developments in United Nations peacekeeping operations', eds Bruch, Muffett and Nichols (note 2), pp. 195–206.

[19] Matthew, Brown and Jensen (note 4).

[20] Article 39 of the UN Charter sets out the UN Security Council's powers to maintain peace. It allows the council to 'determine the existence of any threat to the peace, breach of the peace, or act of aggression' and to take military and non-military action to 'restore international peace and security'.

[21] UN Security Council Resolution 1173 'decides . . . that all States shall take the necessary measures . . . to prohibit the direct or indirect import from Angola to their territory of all diamonds that are not controlled', S/RES/1173, 12 June 1998, para. 12.

[22] Aldinger, P., Bruch, C. and Yazykova, S. 'Revisiting securitization: An empirical analysis of environment and natural resource provisions in United Nations Security Council Resolutions, 1946–2016', eds A. Swain and J. Öjendal, *Routledge Handbook of Environmental Conflict and Peacebuilding* (Routledge: London, 2018), p. 144.

to natural resources.[23] A 2007 Security Council presidential statement emphasized that 'in countries emerging from conflict, lawful, transparent . . . exploitation of natural resources is a critical factor in maintaining stability and in preventing a relapse into conflict'.[24]

At the same time, the international community came together to agree on a series of initiatives that aimed to address a variety of resource-related problems in fragile and conflict-affected states. The Kimberley Process certification scheme, launched in 2003, provides a mechanism to certify rough diamonds entering the international market as 'conflict free'.[25] Today, the Kimberley Process claims that it has stopped 99.8 per cent of the trade in conflict diamonds, although this assertion has been contested.[26] The Extractive Industries Transparency Initiative, also founded in 2003, endeavours to improve transparency in the oil, gas and mining sectors through a system of 'double book-keeping', whereby companies and governments separately report their extractive receipts as a way of discouraging corruption and improving resource governance.[27] The European Union (EU) Forest Law Enforcement, Governance and Trade (FLEGT) process, also adopted in 2003, tries to incentivize better governance, reduce corruption, and improve social and environmental performance in timber-exporting developing countries.[28]

Pronouncements by the Security Council have underlined the need for a whole-system approach to conflict prevention and conflict management

The emergence of climate change as a security issue

Since the early 2000s, there has been a growing understanding of the ways in which climate change might destabilize international peace and security by multiplying existing social, economic and political risks, such as food insecurity, extreme weather events and competition over scarce water resources.[29] In 2007, the United Kingdom was the first country to bring the issue of climate security to the attention of the UN Security Council by initiating a debate to discuss 'the relationship between energy, security and climate'.[30] Since then the matter has been raised more than a dozen times, but mostly in the form of Arria formula meetings, which are open and non-binding debates. There has been resistance from some member states, who argue that the Security Council is not the appropriate forum to decide environmental matters.[31] Nevertheless, a succession of debates sponsored

[23] Stahn, C., Iverson J. and Easterday, J., 'Introduction: Protection of the environment and *jus post bellum*: Some preliminary reflections', eds. C. Stahn, J. Iverson and J. Easterday, *Environmental Protection and Transitions from Conflict to Peace* (Oxford University Press: Oxford, 2017), pp. 1–26.

[24] United Nations, Security Council, 'Statement by the President of the Security Council', S/PRST/2007/22, 25 June 2007, para. 12.

[25] Kimberley Process, 'What is the Kimberley Process?', [n.d.].

[26] Kimberley Process (note 25); and Global Witness, 'Global Witness leaves Kimberley Process, calls for diamond trade to be held accountable', Press release, 2 Dec. 2011.

[27] EITI, 'How we work', [n.d.].

[28] EU FLEGT Facility home page, [n.d.].

[29] Rüttinger et al. (note 7).

[30] Security Council Report, 'The UN Security Council and climate change', Research Report, 21 June 2021, p. 5.

[31] Conca, K., 'Is there a role for the UN Security Council on climate change?' *Environment: Science and Policy for Sustainable Development*, vol. 61, no. 1 (2019), pp. 4–15; and Security Council Report (note 30), p. 5.

by non-permanent members of the council—particularly Germany, Ireland, Sweden and the UK—have helped to sustain attention on this issue.[32]

Addressing environmental degradation and resource scarcity as part of holistic conflict prevention

Meanwhile, over the past 15 years, a series of pronouncements by the UN Security Council have underlined the need for a whole-system approach to conflict prevention and conflict management. This is recognized as particularly important in contexts in which peace operations are functioning given the risk of relapse into conflict. For example, Security Council Resolution 1625 (2005), on 'strengthening the Security Council's role in conflict prevention', reaffirms the need to adopt a broad strategy of conflict prevention across the totality of the UN's operations to address 'the root causes of armed conflict and political and social crises in a comprehensive manner', including where the illegal trafficking of natural resources contributes to conflict.[33] More recently, the 'sustaining peace' agenda of the current secretary-general, which followed the last review of the peacebuilding architecture in 2015, reaffirms the need for a comprehensive approach.[34]

Regional security operations have begun integrating environmental degradation and resource scarcity into their plans and operations

Additionally, over the past decade, regional security entities—such as the AU, NATO and the OSCE—have begun integrating environmental degradation and natural resource scarcity into their plans and operations (see section III). However, there are few explicit mentions of climate change, natural resources or the environment in the foundational mandates of any of the peace operations under the aegis of these organizations.[35] Instead, these organizations have often undertaken a more siloed approach, where individual units or branches are tasked with conducting environmental activities, often alongside and with relatively few links to the political and security mandates of the peace operations. This has tended to inhibit the spread of best-practice approaches within and across organizations.

The OSCE, for example, has an Office of the Co-ordinator of OSCE Economic and Environmental Activities, which is designed to address security-related economic and environmental issues and is engaged in a long list of activities, including promoting transboundary cooperation on environmental challenges, supporting the development and revision of environmental legislation, and creating awareness of the security implications of climate

[32] Born, C., Eklöw, K. and Mobjörk, M., 'Advancing United Nations responses to climate-related security risks', SIPRI Policy Brief, Sep. 2019.

[33] In UN Security Council Resolution 1625, the council 'reaffirms its determination to take action against illegal exploitation and trafficking of natural resources and high-value commodities in areas where it contributes to the outbreak, escalation or continuation of armed conflict', S/RES/1625, 14 Sep. 2005, preparatory text and para. 6.

[34] 'When well-managed, natural resources can be a source of progress, wealth and stability for a nation. When mismanaged or misappropriated, they can have severely negative economic, social and environmental effects and constitute a massive loss for peacebuilding and development'; President of the UN General Assembly, 'The Challenge of Sustaining Peace: Report of the Advisory Group of Experts for the 2015 Review of the United Nations Peacebuilding Architecture', 29 June 2015, p. 15.

[35] Author's survey, May and June 2021.

change.[36] NATO, likewise, has a range of environmental security-related initiatives via its Science for Peace and Security Programme and its Partnership for Peace Trust Fund projects. These include enhancing energy efficiency and fossil fuel independence, building environmentally friendly infrastructure and addressing the impacts of climate change.[37]

Peace operations and non-traditional security risks

The expansion of large-scale peace operations in the 1990s and 2000s started to result in a much larger footprint for peace operations, often with thousands of civilian and military staff being deployed across large areas with basic infrastructures, scarce resources, and impoverished and often traumatized populations.[38] In essence, the definition of what is needed for 'security' has expanded over the past 20 to 30 years and, accordingly, the parameters that govern peace operations have evolved dramatically. Increasingly, peace operations are required to address non-traditional security risks from environmental degradation, climate change and natural resource conflicts. This situation has presented peace operations with four major challenges.

The definition of what is needed for 'security' has expanded and so have the parameters that govern peace operations

First, to understand and mitigate ongoing tensions over environmental degradation and natural resource use through, for example, preventive diplomacy and effective early warning systems. Second, to halt the flow of conflict resources as one way of choking the war economies that incentivize peace-spoilers and perpetuate conflict. Third, to plant the seeds for long-term peace, supporting the long-term transition to development and a functioning state. Fourth, to 'walk the talk' by improving peace operations' own environmental performance as a way of protecting their licence to operate.[39]

Categorizing environmental degradation and natural resource scarcity

When considering ways to respond to environmental degradation and resource scarcity, the activities of multilateral peace operations can be conceptualized along two axes: (*a*) whether they target the drivers or the consequences of environmental degradation; and (*b*) whether they do so directly or indirectly.

Activities that target drivers (or root causes) are proactive in the sense that they seek to prevent environmental degradation and resource scarcity by addressing the factors that might produce or enable them. Activities that target consequences are mainly reactive as they respond to challenges (e.g. acute environmental pollution caused by fighting) that have already been identified, with the objective of helping countries to recover after conflict.

[36] OSCE, 'Office of the Co-ordinator of OSCE Economic and Environmental Activities (OCEEA)', [n.d.].

[37] NATO, 'Environment: NATO's stake', 6 Aug. 2021.

[38] Maertens, L. and Shoshan, M., 'Greening peacekeeping: The environmental impact of UN peace operations', International Peace Institute (IPI), Providing for Peacekeeping no. 17, Apr. 2018, p. 3.

[39] Waleij, A. et al., 'Environmental stewardship in peace operations: The role of the military', eds Bruch, Muffett and Nichols (note 2), pp. 223–48.

Activities are placed on the second axis according to whether they target these drivers and consequences directly or indirectly. Peace operations may conduct some activities that directly target the drivers or consequences of (natural) resource scarcity and environmental degradation, such as peace operation staff monitoring sanctioned conflict resources or implementing a clean-up of an area affected by conflict-related pollution. Other activities implemented by peace operations may work indirectly through third parties, for example, by working to strengthen the capacity of the host government, civil society and local communities to enable them to tackle the causes and consequences of environmental degradation and resource scarcity.

Together, these two organizing principles result in four broad categories of activity that a multilateral peace operation might undertake to address environmental degradation and resource scarcity (see figure 1). Although these four categories are a simplification and may overlap, they can facilitate and structure discussion by enabling a focus on concrete activities. How individual peace operations have tried to pursue these goals in practice is discussed below (see section III).

III. Examples of peace operations that have addressed environmental degradation and resource scarcity

A number of multilateral peace operations have endeavoured to address underlying tensions, interdict conflict resources, mediate resource conflicts or support better NRM in the countries and communities in which they are located (see figure 2 for examples of such operations).

Activities that address the drivers of environmental degradation and resource scarcity

Increasingly, peace operations are being directed to assess and mitigate the drivers of environmental degradation and resource scarcity, particularly where these issues could further undermine security and imperil the core mission of the peace operation.[40] Some examples of these activities are included below. They span a range of interventions from interdicting conflict resources to militarily controlling areas that have produced conflict resources in the past, as a way of denying rebel groups access to easily lootable resources. Several peace operations are being encouraged to monitor growing environmental security risks (especially as they relate to climate change) and to engage in preventive diplomacy to mediate emerging conflicts over natural resources. Many of these interventions are beginning to be described under the broad rubric of 'environmental peacebuilding'—a somewhat loose and contested, but nevertheless useful, umbrella term.[41]

Peace operations are directed to assess the drivers of environmental degradation and resource scarcity where they could risk the core mission

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[40] More than a dozen UN security resolutions now make reference to the need to address climate change impacts on the security environment in which a mission is operating.

[41] Environmental peacebuilding integrates NRM into conflict prevention, mitigation, resolution and recovery to build resilience in communities affected by conflict. See the Environmental Peacebuilding Association's website for more resources, <www.environmentalpeacebuilding.org>.

Direct

Interdicting conflict resources through enforcement of sanctions

Securing areas of natural resource extraction (e.g. mining and logging sites) from armed opposition group control

Preventively mediating emerging natural resource-related tensions

Reducing the environmental footprint of peace operations

Exchanging information with relevant actors regarding the illegal trafficking of natural resources

Collecting and analyzing information on the criminal networks which support armed groups, including on illegal exploitation of natural resources

Supporting improved environmental and natural resource management 'outside the fence' to address environmental challenges related to conflict

Providing mediation support for resource conflicts and support for post-conflict restitution and truth and reconciliation processes

Cleaning up and rehabilitating conflict damage

Drivers   **Consequences**

Monitoring environmental security risks to provide early warning

Assisting host governments (and other local actors) in areas such as sustainable development, institution building and governance, education, and development

Supporting panels of experts in monitoring sanctions and national governments in tracking illegal resource trade

Building capacity for environmental management and good governance of natural resources

Creating the Climate Security Mechanism

Supporting regional dialogues over transboundary and water issues

Integrating environmental issues into disarmament, demobilization and reintegration programmes

Supporting civil society organizations that address environmental, climate and natural resource challenges in peacebuilding

Ensuring that peacebuilding and post-conflict projects related to the environment (e.g. climate change adaptation, reconstruction of water infrastructure) are conflict sensitive

Advising authorities on efforts to keep armed groups from exploiting natural resources

Supporting quick-impact environmental improvements in local communities 'outside the fence'

Indirect

Figure 1. Examples of activities that can be used to address environmental degradation and resource scarcity

Notes: The example activities have been identified in peace operation mandates or were selected from the relevant literature. Activities are not unique to one category and the categories can overlap.
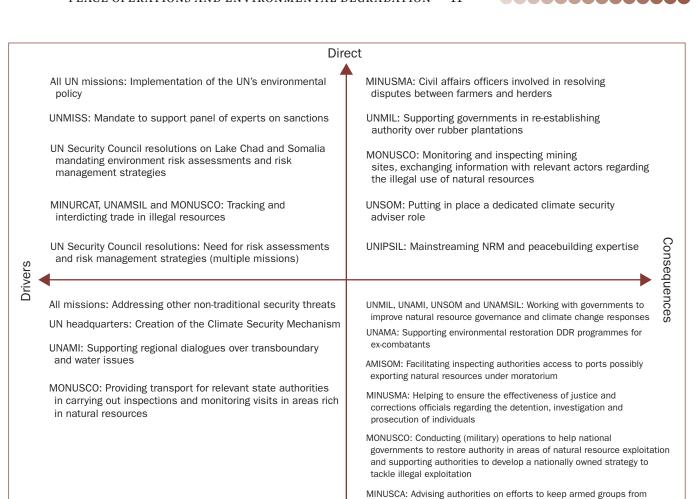
Source: Author's compilation.

Finally, there is an extensive area of work that many peace operations have undertaken but that this paper does not investigate in great detail. This relates to attempts to reduce the environmental footprint of peace operations themselves, so that they 'walk the talk' to avoid multiplying local pollution and prevent tensions with surrounding communities.

Interdicting conflict resources and giving support to panels of experts

Since the 1990s, the UN Security Council has triggered peace operations in response to several resource-related armed conflicts: those in Angola, Cambodia, Côte d'Ivoire and Sierra Leone, to name but a few.[42] This trend has continued to the present day. Of the 182 Security Council resolutions relating to the environment or natural resources that were passed between 1946 and 2016 while a conflict was taking place, 73 mention peacekeeping missions, although 57 of those contain operational provisions requiring action by a UN body.[43] Three recent examples are illustrative. Resolution 2444 (2018), on Somalia and Eritrea, recognizes that the militant group al-Shabab is earning revenue by taxing the illicit sugar trade and agricultural and livestock

[42] Dam-de Jong, D., 'Standard-setting practices for the management of natural resources in conflict-torn states: Constitutive elements of *jus post bellum*', eds Stahn, Iverson and Easterday (note 23), pp. 169–91.

[43] Of the 73 that mention peacekeeping missions, 36 relate to successive UN peacekeeping missions in the DRC. Aldinger et al. (note 22), p. 158.

Direct

All UN missions: Implementation of the UN's environmental policy

UNMISS: Mandate to support panel of experts on sanctions

UN Security Council resolutions on Lake Chad and Somalia mandating environment risk assessments and risk management strategies

MINURCAT, UNAMSIL and MONUSCO: Tracking and interdicting trade in illegal resources

UN Security Council resolutions: Need for risk assessments and risk management strategies (multiple missions)

MINUSMA: Civil affairs officers involved in resolving disputes between farmers and herders

UNMIL: Supporting governments in re-establishing authority over rubber plantations

MONUSCO: Monitoring and inspecting mining sites, exchanging information with relevant actors regarding the illegal use of natural resources

UNSOM: Putting in place a dedicated climate security adviser role

UNIPSIL: Mainstreaming NRM and peacebuilding expertise

Drivers

Consequences

All missions: Addressing other non-traditional security threats

UN headquarters: Creation of the Climate Security Mechanism

UNAMI: Supporting regional dialogues over transboundary and water issues

MONUSCO: Providing transport for relevant state authorities in carrying out inspections and monitoring visits in areas rich in natural resources

UNMIL, UNAMI, UNSOM and UNAMSIL: Working with governments to improve natural resource governance and climate change responses

UNAMA: Supporting environmental restoration DDR programmes for ex-combatants

AMISOM: Facilitating inspecting authorities access to ports possibly exporting natural resources under moratorium

MINUSMA: Helping to ensure the effectiveness of justice and corrections officials regarding the detention, investigation and prosecution of individuals

MONUSCO: Conducting (military) operations to help national governments to restore authority in areas of natural resource exploitation and supporting authorities to develop a nationally owned strategy to tackle illegal exploitation

MINUSCA: Advising authorities on efforts to keep armed groups from exploiting natural resources

Indirect

Figure 2. Examples of multilateral peace operations that have undertaken activities to prevent or respond to environmental degradation and resource scarcity

AMISOM = African Union Mission to Somalia; DDR = disarmament, demobilization and reintegration; ISAF = International Security Assistance Force; MINURCAT = UN Mission in the Central African Republic and Chad; MINUSCA = UN Multidimensional Integrated Stabilization Mission in the Central African Republic; MINUSMA = UN Multidimensional Integrated Stabilization Mission in Mali; MONUSCO = UN Organization Stabilization Mission in the Democratic Republic of the Congo; NRM = natural resource management; UN = United Nations; UNAMA = UN Assistance Mission in Afghanistan; UNAMI = UN Assistance Mission in Iraq; UNAMSIL = UN Mission in Sierra Leone; UNIFIL = UN Interim Force in Lebanon; UNIPSIL = UN Integrated Peacebuilding Office in Sierra Leone; UNMIL = UN Mission in Liberia; UNMISS = UN Mission in South Sudan; UNSOM = UN Assistance Mission in Somalia.

Source: Author's compilation.

production, as well as through its involvement in the illicit charcoal trade.[44] Resolution 2571 (2021), on Libya, recognizes that the illicit export of crude oil presents a risk to peace and stability, and outlines expanded measures to tackle it.[45] Finally, Resolution 2582 (2021), on the DRC, recognizes that

[44] UN Security Council Resolution 2444 'condemns Al-Shabaab's increased revenue from natural resources including the taxing of the illicit sugar trade, agricultural production and livestock', S/RES/2444, 14 Nov. 2018, para. 32.

[45] UN Security Council Resolution 2571 expresses 'concern that the illicit export of petroleum . . . poses a threat to the peace, security and stability of Libya', S/RES/2571, 16 Apr. 2021, p. 1.

the illegal exploitation of natural resources enables and encourages the operations of armed groups.[46]

While the Security Council has often mentioned the role of illegal trade in resources in fuelling conflict, it has much less frequently initiated a peace operation with an active role in monitoring or stopping the illegal trade in conflict resources. One example is the UN Transitional Authority in Cambodia (UNTAC), a Security Council-mandated mission to secure the implementation of a moratorium on the trade in logs, minerals and gems.[47] These cases are rare, though. Instead, the council has often preferred to entrust the monitoring of the trade in conflict resources to ad hoc panels of experts and sanctions panels. For example, Resolution 2428 (2018), on South Sudan, mandated a panel of experts to gather, examine and analyse information on armed groups and criminal networks engaging in the illicit exploitation or trade of natural resources, with the mission consigned to a support role.[48]

Providing security to resource sites

Recognizing the extent to which illegal resource exploitation was driving the conflict in the DRC, in 2008 the Security Council gave MONUSCO an assertive mandate. The council mandated the mission to begin monitoring and inspecting mining sites, and to support the government's efforts to reinstate its control in these areas, as a way of choking off the financial support illegal armed groups were deriving from natural resources.[49] Likewise, the UN Mission in Liberia (UNMIL) was given an expanded mandate to support the Liberian Government's efforts to improve the management of natural resources, as a way of expediting the lifting of sanctions.[50] These examples show how the mandates of large peace operations have shifted over time, in part as a result of a recognition of the pervasive impact of resource scarcity and environmental degradation as an underlying root cause of conflict.

Monitoring environmental security risks

Peace operations are increasingly being asked to include risks linked to environmental degradation, climate change and resource conflicts in their own data gathering, risk assessments and early warning systems. Although the issue of climate change had first been discussed at the Security Council back in 2007, it was not until March 2017 that the UN Office for West Africa and the Sahel (UNOWAS) and the UN Regional Office for Central Africa (UNOCA) were formally tasked with considering the impact of climate change in their risk assessments. Resolution 2349 (2017), on the Lake Chad

More than a dozen resolutions have mentioned climate change in the mandates given to peace operations

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[46] UN Security Council Resolution 2582 expresses 'concern at the continued illegal exploitation and trade of natural resources, which enable these armed groups to operate', S/RES/2582, 29 June 2021, p. 1.

[47] UN Security Council Resolution 792, S/RES/792, 30 Nov. 1992, paras 13, 14.

[48] UN Security Council Resolution 2428 'decides that the Panel should . . . gather, examine and analyse information on armed groups or criminal networks engaging in the illicit exploitation or trade of natural resources in South Sudan', S/RES/2428, 13 July 2018, para. 14(j).

[49] United Nations Environment Programme (UNEP), *Greening the Blue Helmets: Environment, Natural Resources and UN Peacekeeping Operations* (UNEP: Geneva, 2012). p. 71.

[50] Dam-de Jong (note 42).

Basin, recognized 'the adverse effects of climate change and ecological changes among other factors on the stability of the Region, including through water scarcity, drought, desertification, land degradation, and food insecurity' and emphasized 'the need for adequate risk assessments and risk management strategies by governments and the United Nations relating to these factors'.[51]

Since then, more than a dozen such resolutions have mentioned climate change in mandates given to peace operations. For example, Resolution 2423 (2018), on Mali, recognizes the adverse effects of climate change on stability in the country and asks MINUSMA and the government to take the security effects of climate change and other ecological changes into account in their activities, programmes and strategies.[52] Therefore, while a precedent of some kind has been set, so far the resolutions have been geographically limited and focused on risk assessments and risk management strategies.[53]

Mediating resource conflicts

Occasionally, peace operation staff have themselves become directly involved in the mediation of resource-related disputes. This was the case in Chad, where civil affairs officers with the UN Mission in the Central African Republic and Chad (MINURCAT) helped to resolve disputes between farmers and herders.[54] Meanwhile, in Liberia in the early 2000s, UNMIL civil affairs officers facilitated consultative forums under the umbrella of the Liberia–UN Rubber Plantations Task Force, which worked to re-establish government authority over rubber plantations that were occupied by ex-combatants and presented major possible flashpoints in the country.[55] More recently, peacekeeping missions in countries where farmer–herder conflicts are common—the UN Multidimensional Integrated Stabilization Mission in the Central African Republic (MINUSCA), UNAMID in Darfur, MONUSCO in the DRC, MINUSMA in Mali and UNMISS in South Sudan—have been taking steps to mitigate those conflicts. In early 2019, for example, following reports of damage to crops from herders' animals in two districts, MINUSCA held meetings with the leaders on both sides to agree on compensation and conflict resolution mechanisms for the future.[56]

Resolution 2576 (2021), on Iraq, marked a new chapter in the Security Council's approach to environmental degradation and resource scarcity. This was arguably made possible by a new administration in the United States that is more open to concerted action on climate security. Passed unanimously in May 2021, the resolution directs the UN Assistance Mission in Iraq (UNAMI) to support the government with 'facilitating regional

There are things that peace operations can do to cultivate a longer-term transition to peace and development

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[51] UN Security Council Resolution 2349, S/RES/2349, 31 Mar. 2017.

[52] UN Security Council Resolution 2584, S/RES/2423, 28 June 2018, para. 68

[53] Typical language used can be found in e.g. UN Security Council Resolution 2429, S/RES/2429, 13 July 2018: 'Requests the United Nations and the Government of Sudan to consider the adverse implications of climate change . . . in their programmes in Darfur, including by undertaking risk assessments and risk management strategies relating to these factors and further requests the Secretary-General to provide information of such assessments in mandated reporting as appropriate'.

[54] UNEP (note 49), p. 72.

[55] UNEP (note 49), p. 48.

[56] Department of Peace Operations and International Organization for Migration, 'Sustaining peace through the prevention of transhumance-related conflicts', [n.d.].

dialogue and cooperation, including on issues of . . . environment, water [and] adverse impacts of climate change'. This mandate for UNAMI to support regional dialogue shows a growing willingness to direct UN peace operations to engage in sensitive dialogue and mediation processes around issues related to increasingly scarce resources in an area that is facing the effects of climate change more and more.[57]

Capacity building for natural resource management

Meanwhile, there is a growing acknowledgement inside and outside the UN that, even within the context of a complex conflict, there are still things that peace operations can do to improve NRM and plant the seeds of a longer-term transition to peace and development.[58] Conflict can disrupt or destroy the mechanisms that every country needs to manage its natural resources, such as court systems (e.g. to resolve disputes over water) and community groups (e.g. to manage local forests or places where land records are stored). This can be further exacerbated by the short-term coping strategies that people develop in response to conflict. In effect, conflict often results in a vacuum in the governance of natural resources that is politically dangerous and environmentally unsustainable.[59]

Peace operations have been directly mandated to support governments in rebuilding NRM systems

Provincial reconstruction teams (PRTs) deployed by the International Security Assistance Force (ISAF) in Afghanistan from 2002 constituted an attempt to win the hearts and minds of the local population, by linking military and civilian development capabilities together to deliver tangible projects. As part of a 'clear, hold and build' counter-insurgency approach, PRTs worked through quick-impact projects to upgrade local infrastructure, often focusing on improving access to scarce resources, such as water (for drinking and irrigation), or improving road access (for agricultural trade and general mobility).[60] Other peace operations have also adopted a quick-impact approach that bridges civilian and military capabilities. For example, in 2021 the UN Interim Force in Lebanon (UNIFIL) supported local communities in south-eastern Lebanon with quick-impact projects to provide agricultural equipment and tools to enhance food security.[61]

In some cases, peace operations have been directly mandated to support governments in rebuilding systems of NRM. One extreme example of this occurred in 1999 when the Security Council authorized a UN-led peacekeeping mission, the UN Transitional Authority in East Timor (UNTAET), to assume direct control over the administration of the entire country of Timor-Leste, including the control and management of natural resources.[62]

In the case of Liberia, in 2006 the Security Council asked UNMIL to support the government's efforts to regain control over rebel-occupied areas with strategic natural resources, such as several important rubber

[57] UN Security Council Resolution 2576, S/RES/2576, 27 May 2021.

[58] Author's survey, May and June 2021.

[59] Matthew, Brown and Jensen (note 4).

[60] Eronen, O., 'PRT models in Afghanistan: Approaches to civil–military integration', *CMC Finland Civilian Crisis Management Studies*, vol. 1, no. 5 (2008).

[61] United Nations Interim Force in Lebanon (UNIFIL), 'UNIFIL agricultural support to enhance food security in south-eastern Lebanon', Press release, 9 Sep. 2021.

[62] Aldinger et al. (note 22), p. 161.

plantations, and advise the government on efforts to reform its timber and mineral sectors.[63] UNMIL created a specific Environment and Natural Resources unit to work with the relevant government departments, and this was active in helping the government to draft and implement legislation.[64]

Starting in 2008, MONUSCO took an expansive view of its mandate to address risks to peace and security in the DRC, helping to introduce structural reforms to the natural resources sector.[65] In Sierra Leone in 2010, the executive representative of the secretary-general created a post within the UN Integrated Peacebuilding Office in Sierra Leone (UNIPSIL) specifically to work on NRM and peacebuilding in partnership with the UN Environment Programme (UNEP).[66] Overall, the presence of a peace operation in a fragile environment often seems to have provided both the rationale and a platform for somewhat unconventional approaches to addressing the root causes of instability, including those related to environmental degradation and resource scarcity.

Regional security organizations have taken a similar approach. One notable example is the AU Mission for Mali and the Sahel (MISAHEL), which has addressed development and environmental challenges as one of the four pillars of its mandate.[67] This is in recognition of the role of food insecurity and poverty in exacerbating tensions in the region and the necessity of addressing those issues as part of the environmental peacebuilding efforts required for longer-term peace and recovery.[68]

Reducing the environmental footprint of the peace operation

Already by the early 2000s, it was clear that egregious environmental behaviour on the part of peace operations and/or their staff could damage relationships with local communities, undermine trust in the peace operation and, ultimately, imperil the achievement of the mission itself.[69] Since then, peace operations have taken significant steps, both at headquarters and in the field, to reduce the environmental footprint of their operations. In 2009, the UN Department of Field Support released its first environmental policy, which provided a baseline for integrating environmental considerations into the activities of peace operations.[70] In 2016, the Department of Field Support —now renamed the Department of Operational Support—launched a six-year environmental strategy for field missions, and this resulted in the issuing of a new set of guidelines in 2017.[71] These identified objectives and key performance indicators for improved performance across five pillars: energy, water

It has long been clear that egregious environmental behaviour by the peace operation can damage relationships with local communities

[63] UNEP (note 49), p. 48.

[64] UNEP (note 49), p. 48.

[65] UNEP (note 49), p. 71.

[66] The author held this position.

[67] African Union (AU), *Le Mali doit aller plus loin dans le processus de réconciliation* [Mali must go further in the process of reconciliation], AU Mission for Mali and the Sahel (MISAHEL) press release, 23 Jan. 2014.

[68] African Union (note 67).

[69] Maertens and Shoshan (note 38), p. 1.

[70] United Nations, Department of Peacekeeping Operations and Department of Field Support, 'Environmental policy for UN field missions', 1 June 2009.

[71] United Nations, Department of Field Support (DFS), 'DFS environment strategy for field missions', Apr. 2017.

and waste water, solid waste, wider impact, and the introduction of an environmental management system.[72]

In the field, at least five missions—MINUSCA, MINUSMA, MONUSCO, UNAMID and the UN Support Office in Somalia (UNSOS)—have been mandated by the Security Council to consider and manage the environmental impacts of their operations when fulfilling their mandated tasks.[73] However, while environmental issues are specifically mentioned only in certain mandates, the policy and guidelines have been rolled out across all UN peace operations. By the end of 2017, each mission had put in place a mission-wide environmental action plan for the 2017–18 budgetary cycle.[74] All missions are now expected to at least have a designated environmental focal point.[75] The aim is to ensure that the UN's peace operations increase the efficiency with which they use natural resources and minimize the risk they pose to peace, societies and ecosystems.[76]

NATO has similarly established a policy which states that NATO-led forces 'must strive to respect environmental principles and policies under all conditions'.[77] NATO currently has two dedicated working groups that address environmental protection and promote cooperation and standardization among NATO and partner countries. These are the Environmental Protection Working Group and the Specialist Team on Energy Efficiency and Environmental Protection.[78]

Activities that address the consequences of environmental degradation and resource scarcity

Peace operations have engaged in a range of activities that address the consequences of environmental degradation, including those directly caused by conflict. These activities include monitoring environmental degradation and environmental health risks caused by conflict; protecting critical resources; integrating environmental issues into disarmament, demobilization and reintegration (DDR) programmes; and building capacity for NRM in national governments and local communities. The following examples are intended to give an overview of the various ways in which peace operations have tried to incorporate ways of addressing the direct consequences of environmental degradation and resource scarcity into their work.

Monitoring conflict damage

Several missions have a strong monitoring role. This is particularly true of OSCE field operations, which tend to be light in terms of footprint but can move issues up the regional political agenda. For example, since 2014, the OSCE Special Monitoring Mission to Ukraine (OSCE SMM) has done

[72] United Nations, 'UN launches new strategy to minimize environmental footprint of its peace operations', UN News, 29 Nov. 2016.

[73] United Nations, Department of Operational Support, 'Our Approach', [n.d.].

[74] Maertens, L., 'From blue to green? Environmentalization and securitization in UN Peacekeeping practices', *International Peacekeeping*, vol. 26, no. 3 (Feb. 2019), pp. 302–26.

[75] United Nations (note 73).

[76] United Nations (note 72).

[77] NATO, 'Environmental protection: Home', [n.d.].

[78] NATO (note 37).

important work in drawing attention to actual and potential environmental damage caused by fighting in the Donbas and Luhansk regions. This has included shelling near water facilities containing toxic chemicals, which has raised the risks of chemical spills, disruption of the water supply and local pollution.[79] It has also included the impact of fighting on maintenance of the regions' many mines, which in turn have threatened to flood dangerously contaminated water into surrounding rivers.[80]

Protecting biodiversity

Mali hosts about 300 highly endangered elephants in the Gourma desert region. When an insurgency broke out in 2013, rebels and bandits overran the elephants' habitat, which resulted in a sharp increase in poaching. In 2016, MINUSMA worked with local and international non-governmental organizations (NGOs) and the Malian Ministry of Environment to set up the country's first anti-poaching brigade. MINUSMA used its communications and surveillance expertise to support the unit and also provided training and financial support.[81] This helped to dramatically reduce elephant poaching, with no elephants killed between October 2017 and February 2020, when a survey was conducted.[82]

Integrating environmental issues into DDR programmes

The way that DDR programmes are designed and managed can be closely linked to the management or mismanagement of natural resources. Depending on the physical, environmental and economic conditions where DDR is taking place, natural resources can present different risks and opportunities. For example, where ex-combatants have been involved in the looting of conflict resources or have been engaging in rent seeking in natural resource sectors, a continuation of such practices poses a significant threat to sustainable NRM, as well as stability and peacebuilding.[83]

In 2003, the UN Assistance Mission in Afghanistan (UNAMA), the UN Office for Project Services (UNOPS) and the US Agency for International Development (USAID) brought together environmental programming with efforts to disarm, demobilize and reintegrate former Taliban combatants. The Afghan Conservation Corps, as the project was known, employed ex-combatants and vulnerable populations to conduct reforestation activities in pistachio woodlands, planting an average of 150 000 conifer and 350 000 fruit trees per year.[84] Such projects, if managed well, can help to provide sustainable livelihoods for ex-combatants and ease former fighters back into society.

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[79] OSCE, *Environmental Assessment and Recovery Priorities for Eastern Ukraine* (OSCE: Vienna, 2017), p. 41.

[80] OSCE (note 79), p. 45.

[81] Torres, M. and Beaton, M., *Mali Elephant Initiative: Republic of Mali*, Equator Initiative Case Studies
 (Equator Initiative, UNDP: New York, 2021), p. 6.

[82] Africa Sustainable Conservation News, 'Mali—Conservation and enhancement of elephants in Gourma: A joint anti-poaching brigade set up', Mali Web, 16 Feb. 2020.

[83] United Nations Environment Programme (UNEP) and United Nations Development Programme (UNDP), *The Role of Natural Resources in Disarmament, Demobilization and Reintegration: Addressing Risks and Seizing Opportunities* (UNEP and UNDP: Nairobi and New York, 2013).

[84] UNEP (note 49).

IV. Opportunities and challenges

The discussion on whether multilateral peace operations can or should address environmental degradation and resource security triggers debates around operational effectiveness and responsibility. Broadly, there is now a wide degree of acceptance among the key troop-contributing and mission-funding states that multilateral peace operations have a responsibility to adhere to minimum inside-the-fence standards to avoid actively causing damage.[85] There is, however, disagreement as to what those standards should entail.[86] Additionally, over time, there has emerged a recognition that the operational effectiveness of a peace operation may involve addressing conflict resources. What has proven more controversial is the degree to which multilateral peace operations should engage in outside-the-fence environmental and natural resource programming. In general, there is a divide between those who are sceptical of such activities, worried that they add to already challenging mission mandates and are outside the competence of primarily military or diplomatic enterprises, and those who see such activities as a way to facilitate a longer-term transition to development and sustainable peacebuilding.

Opportunities for the involvement of peace operations in addressing environmental degradation and resource scarcity

There are three main opportunities that arise if multilateral peace operations take on the task of addressing environmental degradation and resource scarcity. First, by identifying and addressing underlying challenges of environmental degradation or contested natural resources, peace operations can help to ameliorate short- and long-term drivers of tension and conflict. Peace operation staff often have a nuanced understanding of the local political context, typically are among the very few international actors present in a conflict-affected country, and may hold considerable sway with both the host government and international mechanisms (e.g. the Security Council). As such, they may be able to offer a rare impartial and credible platform through which to mediate tensions that might otherwise precipitate a return to violence.[87]

By addressing environmental challenges, peace operations can ameliorate the drivers of conflict

Second, by promoting and supporting improved capacities for NRM, peace operations can help to set the scene for the transition from conflict to longer-term development. Governments in post-conflict countries are typically short of revenues to fund reconstruction and desperate to kick-start economic activity to provide much-needed jobs and economic growth. A country's natural resources—such as gems, minerals or timber—may offer the quickest route to economic recovery and government revenues. However, if these resources are not managed carefully, their extraction can create a range of new problems, such as distortions of the economy (also known

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[85] Maertens and Shoshan (note 38), pp. 1–3.

[86] Maertens and Shoshan (note 38), pp. 19–22.

[87] Brown, O. and Keating, M., *Addressing Natural Resource Conflicts: Working Towards More Effective Resolution of National and Sub-national Resource Disputes*, Chatham House Research Paper (Chatham House: London, June 2015).

as 'Dutch disease') or localized tensions if the extraction does not benefit surrounding communities, or results in environmental damage or a spike in corruption.[88]

Third, peace operation mandates are increasingly, in some form, setting expectations for transparency and efforts to address corruption and improve governance.[89] As such, these resolutions are helping to focus attention on the management of natural resources in the aftermath of conflict, something that peace operations can help governments to institutionalize as the process of post-conflict recovery begins. This, in turn, can accelerate the transition as a post-conflict country moves from a phase of crisis, characterized by peacekeeping and humanitarian action, to a longer-term phase of post-crisis development that aims to improve governance and solidify recovery.[90]

Challenges to the involvement of peace operations in addressing environmental degradation and resource scarcity

While addressing environmental degradation and resource scarcity may offer opportunities for multilateral peace operations, it also presents some significant challenges. One of the main challenges is that asking peace operations to take on complex environmental responsibilities, whether inside or outside the fence, risks overloading already strained missions and distracting peace operations from their core purpose of maintaining peace and security. Forcing them to take on these responsibilities may overload the mission, overwhelm staff and result in a meaningless exercise in box ticking to satisfy headquarters.[91]

Alongside mission overload, there is also the possibility of mission creep, where a peace operation's activities shift and expand over time such that they are no longer compatible with the mission's original purpose as set out in its mandate. Both concepts have been brandished in Security Council debates about the mandates that should apply to a given peace operation. Mission creep is also often a sign of a deeper disagreement over the extent to which environmental issues should be discussed in the Security Council at all.[92] Some countries fear that doing so is diluting the focus of the council,

Requiring peace operations to take on complex environmental responsibilities risks overloading missions

others argue that it impinges on a country's sovereign right to harness its own natural resources, while others worry that these issues are better dealt with at the level of the General Assembly.[93] The result has often been narrow mandates that limit the scope of peace operations to address these issues.[94]

In part, the concerns about mission overload and mission creep stem from what has been, for a long time, a real lack of environmental expertise within peace operations. Environmental management is not, after all, a core

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[88] Matthew, Brown and Jensen (note 4).

[89] Dam-de Jong (note 42).

[90] Bruch, Muffett and Nichols (eds) (note 2)

[91] United Nations peace operation staff member serving in an African mission, Confidential interview with author, 16 Sep. 2020.

[92] Maertens (note 74).

[93] Stahn, Iverson and Easterday (note 23); and United Nations, Security Council, 'Security Council holds first-ever debate on impact of climate change on peace, security, hearing over 50 speakers', Press release, 17 Apr. 2007.

[94] Maertens and Shoshan (note 38), p. 1.

skill of many peace operation staff. While almost all peace operations now have a designated environmental focal point and most (93 per cent) have an identified, full-time environmental affairs officer, they often face a range of daunting inside-the-fence problems, even before they get to any of the outside-the-fence challenges.[95] Unsurprisingly, there is considerable variation in how the environmental policy and guidelines are rolled out across different operations. Disparities in terms of staff allocation, equipment, budget, local circumstances and the interest of leadership affect the ability to apply the policy and guidance evenly.[96]

A second challenge is that multilateral peace operations may not be the most appropriate actors to deal with these issues, as long as accountability for their environmental performance and impact on natural resource-related tensions remains an ongoing question.[97] In several countries, peace operation staff and troops have been identified as engaging in the trade in conflict resources—buying conflict diamonds during the civil war in Sierra Leone, trading gold for guns in the DRC, buying poached ivory in Rwanda, and purchasing illegal snow leopard parts and pelts in Afghanistan.[98]

The UN has been criticized for not investigating some of these cases sufficiently and not holding the perpetrators to account, leading to accusations that it is sweeping poor behaviour under the carpet for fear of embarrassing troop-contributing countries.[99] One complicating factor is that responsibility for troop conduct and discipline ultimately lies with the troop-contributing countries rather than the leadership of a peace operation. Either the peace operation or the deploying organization can investigate troop behaviour and repatriate any personnel found guilty of misconduct, but further prosecution is up to the troop-contributing country.[100]

Meanwhile, at an institutional level, the UN has occasionally proven unwilling to promptly acknowledge culpability where its standards have fallen short. For example, in 2010, just nine months after a 7.0 magnitude earthquake killed tens of thousands of Haitians, poor waste management at the camp of the UN Stabilization Mission in Haiti (MINUSTAH) led to a major cholera epidemic that afflicted an estimated 800 000 people and caused the deaths of an estimated 9000 people.[101] Until 2016 the UN denied responsibility for the outbreak, despite its own 2011 reports that showed the cholera strain in Haiti was the same as a strain that had started in Nepal, where the peacekeepers had come from. The UN also initially rebuffed all claims for compensation on the basis of legal immunity under the 1946 Convention on the Privileges and Immunities of the UN.[102] Clearly, such actions undermine the credibility of any peace operation in the eyes of the local population.

[95] United Nations peace operation staff member serving in an African mission (note 91).

[96] Waleij (note 12).

[97] Smith, E., Hegazi, F. and Krampe, F., *Climate-related Security Risks and Peacebuilding in Mali*, SIPRI Policy Paper no. 60 (SIPRI: Stockholm, Apr. 2021).

[98] Waleij (note 12).

[99] Human Rights Watch, 'UN: Tackle wrongdoing by peacekeepers—Letter to Secretary-General Ban Ki-moon', 30 Apr. 2008.

[100] Waleij (note 12).

[101] Maertens and Shoshan (note 38), pp.1–2.

[102] Ferreira, A., 'The UN's inadequate response to the Haiti cholera outbreak', *Harvard Political Review*, 6 Mar. 2020.

A third challenge to addressing environmental and natural resource issues outside the fence is precisely that these issues can be tied to the root causes of a conflict. The resulting political sensitivities may also hinder action by multilateral peace operations to support general improvements in NRM. In cases where the exploitation of a resource is linked to one faction or another, or is controlled by elites, it may be politically difficult for a peace operation to actively support improved management of that resource in case doing so affects the mission's perceived impartiality.[103]

V. Cooperation and coordination

Peace operations do not exist in a vacuum. To the extent that peace operations do get involved in issues around environmental degradation and resource scarcity, it is important to have cooperation and coordination across the many different stakeholders. Cooperation and coordination within peace operations themselves, between different peace operations, and with other stakeholders can help to avoid duplication and waste, facilitate the sharing of information, reduce the burden on the host government and increase the overall effectiveness of the peace operation's work. Such coordination is, however, often difficult in the case of environmental degradation and resource scarcity, as the issues involved are often both technically complex and intensely political. As a result, they have a chequered history. Convincing multiple actors to adopt a common strategy (rather than just sharing information, which is a minimal form of coordination) has proven very challenging.

Cooperation can help to avoid duplication, facilitate information sharing and increase the overall effectiveness of the peace operation

Cooperation and coordination between and within peace operations

Capacity for inside-the-fence environmental management

Over the past 15 years, there have been efforts to improve the capacity to address environmental issues within peace operations. These have primarily focused on improving inside-the-fence environmental performance so as to reduce the footprint of peace operations. In order to institutionalize environmental expertise, in 2007 the Department of Field Support established an environmental officer position at their headquarters in New York. By 2015, the department had started to increase its focus on environmental management, establishing this as one of its top priorities. Steps taken included the creation of a strategic coordination function in the Office of the Under-Secretary-General; closer monitoring of environmental risks; and the promulgation of a stronger regulatory framework on waste management, as well as of the previously mentioned 2009 environmental policy and the 2017 environmental guidelines.[104]

However, at the level of the individual mission, the capacity for coordination and direct action is often quite limited. All UN peace operations have a designated environmental focal point to address the mission's environmental footprint, and most of the time this is occupied by someone who has this

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[103] UNEP (note 49), p. 57.
[104] United Nations (note 70); and United Nations (note 71).

as their sole role. Nevertheless, this job can often be challenging, given the wide range of issues facing many peace operations and the limited resources commonly available to address the challenges.[105]

The above circumstances mean that most focal points focus on inside-the-fence environmental challenges. Typically, these are primarily

Addressing outside-the-fence environmental challenges requires a skill set that is focused on addressing complex governance challenges

environmental engineering tasks, for example, overseeing the installation of water and energy-efficient power and sanitation systems. Consequently, individuals are hired with that kind of skill set in mind. Peace operations such as the UN Interim Security Force for Abyei (UNISFA), MINUSCA, MONUSCO and UNAMID have also begun to organize training workshops that inform these focal points about the importance of

environmental management, the tools and guidance that are available to them, and their environmental responsibilities as uniformed members of the peace operation.[106]

In addition, since 2016, UN environmental engineers and experts have been provided to missions through a service known as the Rapid Environment and Climate Technical Assistance Facility (REACT), which is a partnership between the Department of Operational Support and UNEP. Fully funded through missions' own budgets, REACT provides a roving set of specialized environmental engineers who can conduct assessments and provide advice on a range of footprint issues: energy provision, water and waste-water management, solid-waste management and environmental management systems.

Capacity for outside-the-fence environmental peacebuilding

Addressing some of the outside-the-fence environmental and natural resource challenges requires a different skill set—one that is less focused on technical engineering solutions and more focused on understanding and addressing complex political and governance challenges. In this domain, cooperation and coordination outside the peace operation become particularly important.

There are examples of peace operations building unconventional partnerships to bring this sort of expertise into the mission. The first of these was an inaugural NRM and peacebuilding adviser to UNIPSIL. The adviser was appointed on a Department of Political and Peacebuilding Affairs (DPPA) contract, co-located with the UN Development Programme (UNDP) and represented UNEP at the meetings of the UN country team.[107]

There is also a recent trend towards building specific capacities within peace operations to counter the security impacts of climate change. In 2019, UNSOM appointed its first ever environmental security adviser, based in Nairobi. This position reports to the mission and receives technical support from UNEP, providing a mixture of skills and mandates that is enabling the mission to begin to address some of the complex dynamics of climate-related insecurity in Somalia. UNSOM's environmental security adviser focuses on promoting coordination and integration across the mission and the UN country team, including through monthly environmental task

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[105] Ravier et al. (note 18); and Smith, Hegazi and Krampe (note 97).
[106] Ravier et al. (note 18).
[107] The author held this position.

force meetings. The position is helping the mission to mainstream climate security into programming; improve the links between humanitarian, development and peace actions; and provide training and support to the mission, international partners and national counterparts.[108]

Likewise, UNMISS has identified dedicated focal points on climate-related security risks. The peace operation's joint mission analysis centre has begun to incorporate climate-related security risks into early warning assessments to inform decision making across the mission.[109]

In summary

Overall, the roll-out of a centralized environmental policy across UN peace operations and the direct accountability assigned to peace operation leaders for environmental infractions have served to shift the incentives for a reduced environmental footprint. This has helped to improve the baseline environmental performance of UN peace operations inside the fence. However, there is still a great deal of diversity in terms of the initiatives that peace operations take to address the causes and consequences of environmental degradation and resource scarcity outside the fence. Further, the lack of mechanisms to share lessons or standardize such actions across peace operations means that important opportunities may be lost.

> *The lack of mechanisms to share lessons or standardize actions across peace operations means that important opportunities may be lost*

Cooperation and coordination between peace operations and other actors

In 2011, an independent review for the Security Council on civilian capacity in the aftermath of conflict noted that NRM is a core task for the UN overall. It concluded that 'the United Nations has some of the core capacities needed in the aftermath of conflict, but these capacities are uneven and there is confusion as to who does what. This leads to duplication and to unfilled capacity gaps that jeopardize the United Nations' ability to support conflict-affected States'.[110]

However, establishing and sustaining cooperation between peace operations and other actors can be challenging. Even within the UN family, there are multiple entities with specific expertise that a peace operation may be able to draw on, such as UNEP, the World Food Programme, the Food and Agriculture Organization and the UNDP. Typically, dozens of international NGOs and hundreds of local NGOs are present in a post-conflict country, alongside the host government.

The number and diversity of actors and stakeholders involved can be daunting and complicates coordination. Take, for example, the case of Mali. In 2013, MINUSMA took over from the African-led International Support Mission to Mali (AFISMA). MINUSMA has needed to coordinate its activities with, among others, UNOWAS (within the context of the UN

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[108] de Coning, C., Krampe, F. and Sherman, J., 'Emerging lessons from implementing climate-related peace and security mandates', IPI Global Observatory, 20 Apr. 2021.

[109] de Coning, Krampe and Sherman (note 108).

[110] United Nations, 'Civilian capacity in the aftermath of conflict: Independent report of the Senior Advisory Group', A/65/747–S/2011/85, quoted in UNEP (note 49), p. 102.

Integrated Strategy for the Sahel), the EU Training Mission in Mali (EUTM Mali), the EU Capacity Building Mission in Mali (EUCAP Sahel Mali), the French Operation Barkhane (since disbanded) and the Joint Force of the Group of Five for the Sahel.[111] This is all before counting the other international actors, let alone the national ones. A 2016 survey of the north and centre of Mali counted 10 UN agencies, funds and programmes, and 38 major international NGOs operating in the same areas as MINUSMA.[112] In addition, Mali has joined or taken membership action on an estimated 233 multilateral environmental agreements, meaning that the country has a wide range of international commitments on environmental protection (e.g. relating to climate change and land degradation) that may be relevant to MINUSMA's activities.

Thus, the large number of international and national actors implementing activities in post-conflict situations often precludes any single common plan or strategy around environmental degradation and resource scarcity.[113] Nonetheless, modest progress has been made. In 2018, the UN Secretariat decided to establish the Climate Security Mechanism. This is a three-way partnership between the UNDP, UNEP and the DPPA to collate data and analysis on climate security challenges as a way to inform the Security Council, peace operations and the entire UN system of imminent and long-term security risks from climate change.[114] Additionally, a number of peace operations have taken small steps towards increased collaboration with other stakeholders. For example, in June 2019, the UN Interim Administration Mission in Kosovo (UNMIK) and the UN Development Coordination Office supported the Evergreen Kosovo forum, coordinated by Let's Do It Kosovo, a local chapter of an NGO. The forum brought together relevant actors, including governmental ministries, municipalities, youth groups, civil society, businesses, international actors, environmentalists, environmental experts, students and volunteers, to share knowledge and experiences that might contribute to improved environmental performance and sustainable development in Kosovo.[115]

In the field of conflict resources, a number of reports have called for improved coordination and cooperation between expert panels on sanctions and peace operations.[116] Drawing on the respective advantages of each might benefit the work of both and help to improve the enforcement of sanctions. However, the main impediment to increased cooperation is that peacekeeping missions have neither adequate resources (human and financial) nor a clear mandate to provide systematic support to expert panels.

If peace operations are to deliver on these expectations, they will need to cultivate new partnerships to assist with the necessary skills and finance

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[111] United Nations Office for the Coordination of Humanitarian Affairs (OCHA), 'Mali: Presence of UN and international NGO by cercle in the north and centre of the country', ReliefWeb, 22 Feb. 2016.

[112] OCHA (note 111).

[113] United Nations, Department of Peacekeeping Operations and Department of Field Support, *United Nations Peacekeeping Operations: Principles and Guidelines* (United Nations: New York, 2008).

[114] United Nations, Department of Political and Peacebuilding Affairs, 'Addressing the impact of climate change on peace and security', [n.d.].

[115] United Nations Mission in Kosovo, 'Climate action for peace: Young environmentalists in Kosovo unite for a better future', 3 Oct. 2019.

[116] See e.g. Biersteker, T. J. and Eckert, S. E., *Targeted Sanctions: The Impacts and Effectiveness of United Nations Action* (Cambridge University Press: Cambridge, 2016), p. 12.

Ultimately, the Security Council needs to better understand the potential for improved collaboration, as well as the normative, political and operational challenges inherent in encouraging such joint support.

In summary, the progressive expansion of peace operations' mandates to address more of the causes and consequences of environmental degradation and resource scarcity has not always been accompanied by greater collaboration by the peace operations with the organizations that may help them to deliver those mandates. If peace operations are to deliver on the higher expectations being placed on them, they will need to cultivate new partnerships with organizations that can assist with the necessary skills and finance.

VI. Conclusions

Since the end of the cold war, an extensive body of research has identified ways in which environmental degradation and resource scarcity can trigger, fuel and prolong conflict, and complicate peacebuilding. For many years, peacekeepers and conflict mediators viewed environmental, natural resource and climate issues as secondary concerns to be dealt with by another part of the international system or relegated for attention at a later stage.

Over the past 15 years, evidence that this approach is not sustainable has permeated international debates about modern peace operations. This has created high expectations for peace operations to address these complex, non-traditional security risks more effectively. Peace operations, amid the multiplying tasks that are on their plates, have often struggled to keep up.

Most researchers and peace operation staff would agree that peace operations should go beyond salving the symptoms of conflict and address its root causes wherever possible. They would also agree that a degree of environmental awareness and environmental programming is necessary for a successful peace operation. However, there is still considerable debate about what is feasible and appropriate within the imprecise boundaries and limited mandates of individual peace operations.

Nevertheless, a number of peace operations are endeavouring to address these issues: working to resolve latent or active disputes; reducing their own environmental footprints; interdicting conflict resources to remove some of the financing for conflicts; and planting the seeds for longer-term peacebuilding and economic regeneration. Coordination is needed to avoid the duplication of effort, to exchange information and to align goals. In cases where pea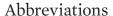ce operations have a direct mandate on NRM, it is essential to have a coordination framework that includes the various UN, governmental, local and international actors working on the ground to address natural resource challenges.[117]

There are many challenges to navigate, but also much that operations can do to tackle these non-traditional threats

One way to improve coordination may be to look at new means to ensure that environmental issues, climate projections and natural resource considerations are fully assessed and reflected in the technical field assessments that precede the deployment of a peace operation. Later, once a mission is up and running, another way to improve coordination across

[117] UNEP (note 49).

the activities of the peace operation and the wider UN country team is to ensure that environmental issues are included in the common country assessments that periodically drive the five-year plans for the UN Sustainable Development Cooperation Framework (UNSDCF).

As the international community moves forward, it should consider how the risks and opportunities from natural resources and the environment might be addressed in a more coherent and strategic way by the combined efforts of the peace operation, the existing UN country team, non-resident agencies, and the host nation government and civil society. The resulting integrated strategic framework should clearly articulate a division of responsibility and coordination scheme for addressing the political, security and economic dimensions of natural resources, including links to DDR programmes and sanctions.[118] While there are many challenges to navigate, there is also much that peace operations can do to more effectively address the emerging non-traditional security threat posed by resource scarcity and environmental degradation.

[118] UNEP (note 49).

Abbreviations

AU	African Union
DDR	Disarmament, demobilization and reintegration
DPPA	Department of Political and Peacebuilding Affairs
EU	European Union
MINUSCA	UN Multidimensional Integrated Stabilization Mission in the Central African Republic
MINUSMA	UN Multidimensional Integrated Stabilization Mission in Mali
MONUSCO	UN Organization Stabilization Mission in the Democratic Republic of the Congo
NATO	North Atlantic Treaty Organization
NGO	Non-governmental organization
NRM	Natural resource management
OSCE	Organization for Security and Co-operation in Europe
UN	United Nations
UNAMID	UN–AU Hybrid Operation in Darfur
UNDP	UN Development Programme
UNEP	UN Environment Programme
UNIPSIL	UN Integrated Peacebuilding Office in Sierra Leone
UNMIL	UN Mission in Liberia
UNMISS	UN Mission in South Sudan
UNOWAS	UN Office for West Africa and the Sahel
UNSOM	UN Assistance Mission in Somalia

SIPRI BACKGROUND PAPER

PEACE OPERATIONS AND THE CHALLENGES OF ENVIRONMENTAL DEGRADATION AND RESOURCE SCARCITY

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