Entry points and priorities for MINUSMA to address environmental and climate security in Mali

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Introduction

Environmental impacts and climate change can have direct and indirect effects on peace and security. These risks are shaped by the intensity of environmental stressors or shocks as well as by the exposure, the vulnerability and resilience of affected states and their people. In fragile states such as Mali, climate change and environmental factors may not always be direct causes of violent conflict. Yet, there is ample evidence that their cascading effects, such as livelihood insecurity and competition over natural resources, exacerbate important drivers of conflict and fragility, thereby challenging stability. Environmental and climate-related security risks can thus be considered threat multipliers that need to be taken into account when building peace and resilience in Mali (Detges et al., 2020; Puig Cepero, 2021).

Climate change and environmental pressures are challenges that cut across borders and silos. Integrating these into UN stabilisation missions can help to better address the root causes of conflict and instability, and advance the missions' efforts towards creating more stable, resilient and sustainable environments in their respective host countries. Since its deployment in 2013, the UN Multidimensional Integrated Stabilization Mission in Mali (MINUSMA) has worked on ways to address security risks associated with the environment and the effects of climate change. The Mission also undertook efforts to green its operations and compounds. Nonetheless, environmental and climate security have not been systematically mainstreamed into the Mission's strategies and operational frameworks. To increase its overall impact, MINUSMA should identify what additional measures and partnerships it could develop to properly plan for and address environmental and climate-related security risks.

This policy paper provides entry points and priorities for mission management on how this could be done. It was developed by adelphi and built on existing research that covered environmental issues and climate security in Mali. In addition, it relied on guidance from the Climate Security Expert Network (CSEN)[1] and on ongoing analytical work carried out by Weathering Risk[2]. Climate change projections draw on the modelling work done by the Potsdam Institute for Climate Impact Research (PIK) AGRICA Project.[3]

[1] CSEN comprises a range of international experts with varying context-specific and thematic expertise, including on Mali, the broader Sahel region and UN peacekeeping. Inputs for this paper were provided by Chitra Nagarajan, climate security and civilian protection consultant; and Christophe Hodder, UN Climate Security and Environmental Advisor to Somalia.

[2] Weathering Risk is a multilateral initiative which combines climate impact data, machine learning and conflict analysis to provide policy and operational decision support tools and resources to promote peace and resilience in contexts jointly vulnerable to conflict, and climate and environmental change.

[3] See: AGRICA Project

I. Environmental and climate-related security risks in Mali

Climate change and projections

Mali contains significant climatic variability: ranging from the arid Sahara Desert in the north to the semi-arid Sahel and seasonally flooded Niger delta in the centre and the humid savannahs in the south. While northern Mali sees greatest temperature variation, the south has the highest average rainfall. The rainy season is about three months long in the north (July – September) and lasts for up to 6 months in the south, with increased rainfall between June and October. In the south of Mali, precipitation rates exceed 1100 mm/year, while in the north annual precipitation remains at levels around 50 mm/year (Baratta et al, 2021).

Mali's climate variability includes the edge of the Sahara shifting north and south in response to fluctuations. With climate change, these fluctuations have become increasingly unpredictable. Since the beginning of the 20th century, the average temperature in Mali has increased by nearly 1°C.[4] Both Sahelian (north and centre) and non-Sahelian (south) regions of Mali are subject to increasing temperatures and rainfall variability, as well as increased frequency and severity of extreme weather events. These are not only projected to intensify in the future but already affect the livelihood security of communities across all Malian regions (Nagarajan, 2020).

Key climate projections in Mali include:

- a temperature rise between 2.0 and 4.6 °C by 2080, compared to pre-industrial levels, with northern Mali facing the highest rise in temperature;
- a shift in agro-ecological zones, with regionally varying changes in species richness and a potential increase in crop land exposure to drought which will impact future crop yields in different ways;
- high uncertainties in future annual precipitation. Overall, average annual precipitation might decrease by 10 mm per year by 2080, but regional variations will be high and future dry and wet periods are likely to become more extreme;
- an increase in the number of heatwaves, leading to higher heat-related mortality (Tomalka et al., 2020).

The 2019 Intergovernmental Panel on Climate Change (IPCC) Report identified the Sahel as a 'climate change hot spot' (IPCC, 2019). Unfortunately, there is a lack of credible climate data on Mali and the Sahel more broadly. Relatively easily measurable data such as precipitation and air temperature levels are largely available across the country. However, there is substantial lack of climate data on parameters that are more complex to measure, such as rainfall intensities, wind speeds and air pressure, for which additional, more advanced measuring devices are required (Tomalka et al., 2020). More detailed and up-to-date, country-specific, and sub-national climate data for the different Sahel nations and climate zones would therefore be of significant value and is a particular gap in addressing climate-related security risks (Nagarajan, 2020).

Impact of climate and environment on livelihoods and security

Climate change and environmental stress in Mali mostly impact livelihoods directly dependent on natural resources due to a decrease in agricultural yields, unsuitability of grazing land, changes in ground and surface water, and the destruction of crops, livestock and homes due to flooding (Nagarajan, 2020). Primarily due to population growth, water availability in Mali is

[4] This estimate was calculated by PIK for a Weathering Risk case study on Mali, planned to be published in 2022.

projected to decline drastically, which is expected to increase competition over scarce resources (Tomalka et al., 2020). This would have a severe impact on human security because the vast majority of the population remains highly dependent on pastoralism, fishing, and subsistence agriculture. Shocks and pressure to these already fragile sectors also have broad ranging impacts on social cohesion and economic systems, as well as on peace and security. Climate change and extreme weather events could also cause severe damage to the infrastructure sector in Mali. Transport infrastructure is particularly vulnerable, yet essential for people's livelihoods (Tomalka et al., 2020).

Adaptation to climate and environmental changes, such as seasonal and economic migration as well as changes in customs, practices and regulations, can increase pressure on and competition over natural resources, especially when poorly managed. Related conflicts mostly take place within and between communities that have similar livelihoods, such as farmers and herders. While pastoralism has co-existed with agriculture for centuries, the practice is facing increased pressure in Mali and the wider Sahel region due to reduced land, water scarcity, unpredictable weather and the proliferation of armed groups (ECOSOC/7015-PBC/133). In many Malian regions, the lack of presence of state authorities as well as poor government policies and practices have reduced pastoralists' access to land and water by privileging agricultural development, which played a significant role in driving conflicts between farmers and pastoralists. Illegal taxation on cattle as well as cattle rustling have become sources of financing and sustaining livelihoods, including for armed groups. These long-standing practices have worsened with the deteriorating security situation, particularly in the Liptako-Gourma region (i.e. the Mopti, Gao and the Meneka regions) (Assanvo et al., 2019; Puig Cepero, 2021).

In Mali, legislation and policy aimed at supporting livelihoods has at times hindered resilience, as they were not sensitive to climate and resource availability. For instance, enforced sedentarisation policies, marginalisation of pastoralists due to agricultural expansion, and poor management of international aid aimed at addressing impacts of drought has led to some frustration in different communities. Policies that support certain communities and provide access to new resources can also lead to increased competition. For example, new wells dug for pastoralists in the pastoral reserve of Tolodjé in Mopti led Dogon farmers to settle there and, over time, assert rights over land surrounding these wells, increasing tensions and worsening pastoralist-farmer relations (Nagarajan, 2020).

With regard to the extractive sector, Mali is rich in some precious stones and metals. It is Africa's third-largest gold producer and discoveries of other minerals such as bauxite and silver have boosted revenues from the mining sector (BTI, 2020). Artisanal gold mining has boomed in the wider region since the 2012 discovery of a Saharan vein stretching from Sudan to Mauritania (OECD and LGA, 2015). In recent years, particularly in areas where the Malian state is weak or absent (i.e. northern Mali), artisanal gold mining has attracted armed and terrorist groups, as it constitutes an attractive new source of funding and potentially even recruits. Illicit networks are involved in smuggling gold, which increases the risk of violence and transnational crime (Crisis Group, 2019). In addition, Mali's artisanal gold mining sector regularly uses chemicals (i.e. mercury and cyanide) and dredges rivers, which can cause environmental damage such as soil contamination and drying waterways. These harm human security and also lead to local conflicts, for instance around use and access of waterways (Koné and Adam, 2020).

Violence around access and control of mining sites has mostly affected artisanal mining activities in northern Mali. However, emerging trends suggest that violent groups have also identified

Mali's southern and western region as strategic value. The Kayes region, which produces an estimated three quarter of Mali's gold, could be a windfall for them. Research indicates that uncontrolled artisanal gold mining in Kayes is damaging the environment and fuelling trafficking and local conflicts. Recent security incidents also indicate that the region is increasingly becoming a hotbed of extremist violence (Koné and Adam, 2020 and 2021).

Competition and illegal activities related to natural resources not only fuel violent conflict, they also undermine resilience, and increase vulnerability of local communities, particularly marginalised groups, women and youth. Climate insecurity and environmental impacts affect women and men differently, and gender inequalities can hamper the resilience of women and girls. It also has differential impacts according to age, class, disability, ethnic background, and other factors. There is already a high degree of vertical and horizontal inequality in Mali, and environmental and climate insecurity may in itself become an additional source of grievance. Environmental-induced livelihoods losses makes people also more vulnerable to violence and to armed groups who often include social exclusion and inequality as well as state abuses, corruption, and rent-seeking in their narratives (Nagarajan, 2020).

Yet climate change and environmental pressures in Mali do not drive violence in and of itself. The country's environmental and climate-related security risks are exacerbated by socio-economic factors, including a high poverty rate, slow economic development, dependence on rain-fed agriculture, and weak governance. In addition, poor migration management, including regional and seasonal migration as well as urban-rural migration, have led to and exacerbated demographic pressures. Other factors are unequal gender power relations, intra- and inter-group inequality, reduced social cohesion, a history of violence, and ineffective, unjust conflict and natural resource management (Nagarajan, 2020).

II. Environmental and climate security in UN peacekeeping

The United Nations Environment Programme (UNEP) suggests that since the mid-twentieth century, at least 40 per cent of all intrastate conflicts have been linked to natural resources, and that this link doubles the risk of a conflict relapse in the first five years (UNEP, 2009). The UN Security Council (UNSC) has debated the impact of environmental factors and climate change on peace and security since 2007 (SC/9000). It recognised that UN peace operations deployed in natural resources-endowed countries experiencing armed conflict could play a role in helping the host government to prevent the illegal exploitation of those resources from further fuelling the conflict (S/PRST/2007/22). Following a 2009 Secretary General report on emerging climate change-related security threats, which included a proposal for actions to lower the risk of climate-related insecurity (A/64/350), the UNSC requested the Secretary-General to ensure that his reporting to the Council contains contextual information related to possible security implications of climate change (S/PRST/2011/15).

Despite the request to report on environmental and climate security, the UNSC has not laid out a systematic approach to assessing these risks or responding to them, nor has it agreed upon a climate security resolution.[5] The UNSC could play a critical role in factoring climate change into the humanitarian-development-peace nexus, as well as in ensuring that peace operations have the know-how and capabilities to integrate environmental and climate-related factors into analysis, reporting, planning, operations, programming, and performance assessments, also as part of the UN's Delivering as One agenda and the 'Do No Harm' approach.

III. Environmental and climate security in the MINUSMA mandate

MINUSMA has been active since July 2013 and its first mandate already included some environmental-related language, more specifically the requirement for the Mission to consider and manage the environmental impacts of its operations (S/RES/2100). MINSUMA was the first UN stabilisation mission that received a mandate by the UNSC to manage its environmental impact. Nonetheless, it was only with the mandate renewal in 2018 that the UNSC recognised the adverse effects of climate change, ecological changes and natural disasters on the stability of Mali, including through drought, desertification, land degradation and food insecurity. It noted the importance for the Malian government and the UN to take into consideration the security implications of the adverse effects of climate change and other ecological changes and natural disasters (S/RES/2423). In subsequent mandates, including MINUSMA's most recent mandate, the UNSC continued to emphasise the need for adequate risk assessment and risk management strategies by the government of Mali and the UN relating to climate security and environmental factors. Nonetheless, since the 2018 mandate, operational paragraphs no longer include language linking climate and environmental risks to peace and security (S/RES/2584).

MINUSMA, through its Environment Unit, has since its deployment worked to reduce its environmental impact, including by training personnel on environmental management, waste management, developing and implementing an environmental action plan, conducting inspections of the Mission's environmental footprint, environmental monitoring of camps,

[5] On 13 December 2021, Russia used its veto in the UNSC to block a thematic resolution on climate change and security put forward by Ireland and Niger.

improving energy efficiency and mainstreaming the use of renewable energy. Since the financial year 2018-2019 and in response to the Department of Operational Support (DOS) Environment Strategy, MINUSMA also has to report to the General Assembly in its annual performance reports on key performance indicators, including one environment score (DOS, 2020).

Apart from efforts to green its operations, some MINUSMA sections already respond to environmental and climate-related security risks within their own mandated activities. For example, the Civil Affairs Section (CAS) and the Mediation Unit work with local communities on conflict mediation over access to and use of natural resources. The Mission's Security Sector Reform (SSR) supports Malian authorities and the Wild Foundation in the prevention of desert elephant poaching, which spiked in Douentza and Gourma-Rharous after armed groups sought to secure new sources of funding through the trafficking of ivory (S/2015/1030). Other sections such as the Office of Stabilization and Early Recovery, Disarmament, the Demobilization and Reintegration (DDR), the Joint Mission Analysis Centre (JMAC) and the Joint Operations Centre (JOC) all demonstrated approaches that in one way or another address environmental and climate-related security risks (Hegazi et al., 2021).

While acknowledging past and existing efforts, MINUSMA could further mainstream climate security and environmental peacebuilding through more systematic and comprehensive mainstreaming at all levels (strategic, operational, tactical) and across all mission components (civilian, military, police) and pillars (SRSG, COS, DSRSG-P, DSRSG-RC-HC, MSD).[6]

[6] Special Representative of the Secretary-general (SRSG), Chief of Staff (COS), Deputy SRSG Political Affairs (DSRSG-P), Deputy SRSG Resident Coordinator and Humanitarian Coordinator (DSRSG-RC-HC), Mission Support Division (MSD).

IV. How MINUSMA could address environmental and climate security

To contribute to enhancing resilience in Mali vis-à-vis environmental pressures and climate insecurity, MINUSMA should move beyond its own environmental footprint to address environmental and climate-related security risks more broadly. This starts by aiming at having a more holistic, positive impact on local communities and the host country by transferring environmental knowledge and by implementing programmes and operations that take into account environmental aspects and that are driven by and benefit local communities.

The Mission could focus its environmental and climate security programming around four key overlapping pillars (see Figure 1). These could be guided by the UNEP two-step approach to build resilience to environmental and climate-related security risks:

1. Assess the links and interactions between climate change, environmental factors, and armed conflict, and identify risks; and,
2. Translate assessments into appropriate responses that link peacebuilding, climate change adaptation, and development measures (UNEP, 2019).

Environmental peacebuilding[7]	**Coordination and partnerships**	**Knowledge management, awareness raising and capacity-building**	**Environmental impact**
Goal: Mainstream environmental peacebuilding approaches, including natural resources management related to security.	**Goal:** Coordinate and build partnerships to integrate environmental and climate security into the triple-nexus approach.	**Goal**: Strengthen data collection and analysis and build capacities amongst relevant actors.	**Goal:** Green the Mission's operations and programmes, including financing of infrastructure works.
Key partners and stakeholders: UNCT, UNOWAS, UNHQ, national and international security forces, governance actors (international, national, regional, local), civil society actors, communities, humanitarian and development partners, private sector.			

Figure 1: Key environmental and climate security pillars for MINUSMA

Environmental peacebuilding

MINUSMA could integrate human-centred, context-specific environmental peacebuilding approaches into its operations and programming. These should be evidence-based and founded in an iterative and collaborative process, owned and driven by relevant stakeholders. Climate-related and environmental risks and needs should be systematically incorporated into national

[7] This paper follows the UNEP definition: 'Environmental peacebuilding integrates natural resource management in conflict prevention, mitigation, resolution, and recovery to build resilience in communities affected by conflict.'

and local peace negotiations, mediation and protection of civilian (POC) efforts and at all levels.[8] At the same time, MINUSMA needs to ensure they do no harm to climate resilience and, where possible, actively promote effective environmental and climate adaptation. Given the particular effect of climate change and environmental impacts on women, youth and other vulnerable groups, MINUSMA would need to take gender and other inequalities among populations into account to ensure equity and mitigate conflict risk. If not, there is significant risk that socially excluded and marginalised populations will remain trapped in a cycle of vulnerability to climate change, conflict and the intersection of the two.

Evidence shows that good natural resource governance is a contributing factor to community resilience in face of violent conflict, environmental impacts and climate change. In some cases, environmental challenges could provide a common ground for reconciliation or cooperation between conflict parties. While numerous environmental laws and policy frameworks already exist in Mali, natural resources are still poorly governed and laws unimplemented throughout most of the country, particularly in areas affected by violent conflict. Environmental laws are more likely to be adopted, understood, supported and implemented if derived from an inclusive process and result in customary titles being formalised. Different local, regional and national approaches may be looked at. MINUSMA could strengthen its partnership with the UNCT, in particular UNDP, to support the government and communities in natural resource management to prevent and mitigate violent conflict. Some priority areas for MINUSMA to focus on and which affect stability in Mali include agriculture, livestock, water (including fisheries), forest and the extractive sector, particularly gold mining. For preventing, mitigating and resolving transhumance-related conflicts, the Mission could support dialogue between farmers and herders before and after the migration season, work with authorities to establish buffer zones, protect agreed corridors and key migratory routes, conduct confidence-building visits in affected areas, and engage with local leaders to develop mediation mechanisms (Hyman et al. 2020).

In the northern and central regions of Mali, the social contract between the state and the population is severely damaged, and this constitutes a significant conflict driver. There is an urgent need for structural reform in the security and environmental sectors, and to integrate environmental factors into security governance. For instance, the paramilitary Eaux-et-Forêts is one of the key environmental security agencies of the Malian government, but it engages in extortion and commits violence against civilians. Its armed and uniformed agents are allowed to keep a percentage of fines collected (in addition to money extorted). Forestry Agents have been heavy handed and predatory, for example in taxing, imprisoning and fining women for collecting firewood and pastoralists for grazing livestock. More efforts are needed in joint state-citizen forest management to protect the environment, enable livelihoods, and address current frustrations and grievances (Nagarajan, 2020).

Similarly, MINUSMA could support governance actors in developing locally-informed, collaborative responses and dialogue mechanisms to tackle farmer-pastoralist conflicts. MINUSMA could also collaborate with the government and other stakeholders to develop a strategy to protect civilians in and around artisanal gold mines, to prevent and mitigate mining-related conflicts and to promote responsible and legal exploitation and trade of artisanal gold (Crisis Group, 2019). However, as many artisanal mines are controlled by terrorist organisations, the options for MINUSMA to secure mining sites might be limited under its current mandate.

[8] MINUSMA's first mandated priority is the implementation of the 2015 peace agreement in Northern Mali. It's second mandated priority is stabilisation in Central Mali.

Coordination and partnerships

Research indicates that coordination between MINUSMA and the UNCT around climate-related security risks remains rather weak and underdeveloped (Hegazi et al., 2021). In its efforts to enhance coordination and build partnerships, MINUSMA could deploy an environmental and climate security advisor (the 'Advisor'), for whom roles and responsibilities are further elaborated in Section III. Strategic positioning within the office of the Deputy Special Representative of the Secretary-General, Resident and Humanitarian Coordinator for Mali (DSRSG-RC-HC) could facilitate the Advisor's role and increase its effectiveness, not only within the Mission but also in relation to the UN Country Team (UNCT). The DSRSG-RC-HC has a triple-hat function and aims to bring together the different UN agencies and the Mission to improve the efficiency and effectiveness of operational activities at the country level. The office is mandated to advance the UN's Delivering as One agenda and to promote and operationalise the New Way of Working (NWOW) across the development, humanitarian, peace, security and state-building pillars of the UN's work in Mali (A/61/583 ;OCHA, 2017).

Finally, MINUSMA and its environmental and climate security advisor should build relationships with the UN Office for West Africa and the Sahel (UNOWAS), which is mandated for climate security in the Sahel region, and the Economic Community of West African States (ECOWAS). UNOWAS recently launched a UN Regional Working Group on climate change, environment, security and development in West Africa, to which MINUSMA could contribute (UNOWAS, 2021; Ngozi, 2020). Building relationships with ECOWAS could help to build capacity in the wider region to address climate and environmental security risks.

Knowledge management, awareness raising and capacity-building

Regarding knowledge management and capacity-building, this could include systematically mainstreaming environmental and climate security into the Mission's existing data collection, analytical and reporting capacities, as well as raising awareness and building capacity in other mission entities, such as the rule of law, human rights, political affairs, civil affairs, protection of civilians (POC), DDR/SSR, the Force and UN Police (UNPOL). The priority should be to strengthen existing mechanisms rather than developing new and parallel systems.

There is a need to build understanding of climate change and conflict dynamics in Mali and how they vary between regions. Despite the significant role climate change and environmental factors play in shaping the risk landscape, there is currently no detailed evidence-based analysis of climate security in Mali that is grounded on both up to date climate science and conflict analysis. MINUSMA would benefit from gathering quantitative and qualitative climate-related and environmental security data, derived from regular reports with a broad cross-section of climate and conflict-affected communities, specifically those of different ages, genders, disabilities, ethnicities, and livelihoods. The analysis of this context-specific data could inform mechanisms to address risks and people's needs. It could also feed into an integrated UN climate security assessment that analyses current dynamics and plots future trajectories in Mali. Such an assessment would fill an evidence gap and serve as a foundation for data-driven and evidence-based policy making and programming that is environmentally and climate sensitive.

These efforts could all contribute to stronger early warning mechanisms and conflict analysis that enable the Mission to identify areas most at risk for climate and environmental impacts. In addition, the Mission could benefit from already existing climate and environmental data by other UN agencies which could feed in the Mission's analysis and reporting system. Monitoring and evaluation (M&E) is also critical to avoid that the Mission's programmes and operations are

rolled-out in harmful or ineffective ways. M&E activities would therefore need to mainstream environmental and climate security indicators.

Environmental impact

MINUSMA should aim to achieve maximum efficiency in its use of natural resources and operate at minimum risk to people, societies and ecosystems. The Mission could further strengthen these efforts to reduce its own environmental impact, including through sustainable waste management, investing in renewable energy and by supporting and financing environmentally friendly and climate proofing infrastructure. All infrastructure projects implemented or financed by MINUSMA should be climate-proofed to ensure mid- and long-term sustainability. In implementing the DOS Environment strategy, the Mission could also strengthen linkages with environmental peacebuilding. By reducing emissions and the dependency on fossil fuels, the Mission could enhance its operational capacity, and limit logistical costs and staff safety risks (e.g. resupply convoys require enhanced protection measures as they are often targeted by armed groups) (DOS, 2020; UNEP, 2012).

V. The environmental and climate security advisor

The appointment of an environmental and climate security advisor could help MINUSMA in mainstreaming an integrated climate-sensitive and environmental agenda. As environmental and climate security are essentially cross-cutting topics that touch upon the triple-nexus of peacebuilding, humanitarian and development work, the Advisor should also contribute to wider UNCT efforts in this area. Deployed in the office of the DSRSG-RC-HC and with a direct line to the mission leadership as well as the UNCT, the Advisor could be well-positioned to take on the following roles and responsibilities:

Roles and responsibilities of the environmental and climate security advisor

Mainstreaming climate security and environmental peacebuilding

- The Advisor could support Mission leaders and management in the development and implementation of strategies, policies, operations and programmes that integrate climate change and environmental factors into the triple nexus-based approach (humanitarian, development and peace). The Advisor could identify and work with key mission sections (JMAC, JOC, POC Unit, Civil Affairs, Political Affairs, Mediation, Human rights, Office of the Senior Women's Protection Adviser (OSWPA), Gender Unit, Stabilization & Recovery Unit, the Force and police components, DDR, SSR, etc.) to strengthen existing approaches and integrate an environmental and climate security lens in a collaborative manner.
- Some key strategic and guiding documents in which environmental and climate security could be integrated include the Mission Concept and plan, the risk register and periodic progress reports such as the Secretary-General reports. In collaboration with the UNCT, UNOWAS and the wider UN system, the Advisor could also support the incorporation of climate security and environmental protection into broader strategic frameworks, such as the UN Sustainable Development Cooperation Framework (UNSDCF) for Mali, or regional ones such as the UN Integrated Strategy for the Sahel (UNISS), or the UN Support Plan for the Sahel (UNSP). The Advisor could also play a key role in feeding UNHQ discussion, in particular in the UNSC, around climate security and environmental peacebuilding.

Coordination and partnerships

- The Advisor could play a key role in mainstreaming climate security and environmental peacebuilding into the UN's Delivering as One agenda and NWOW in Mali. This could be done by coordinating climate-sensitive programming and decision-making within the Mission and by collaborating with the UNCT and UNOWAS. The Advisor could also foster civil–military coordination at the intersection of environment, climate and security.
- This coordination function could include working with colleagues in the Mission and external entities (national government, Malian security forces, civil society groups, humanitarian and development partners, the UNSC Panel of Experts, etc.) to advance the environmental agenda. This could include establishing working groups, developing effective information-sharing platforms, fine tuning analysis and reporting, developing training and awareness-raising material, and developing climate mitigation and adaption frameworks.
- In addition to building bridges between relevant partners, the Advisor could also strengthen the vertical level by connecting local knowledge and expertise to the (inter)national policy level. This could include promoting local best practices on climate and environmental adaptation, and feeding context-specific narratives into analysis and reporting. Part of this effort could be to identify, work together with and promote local champions for peace and environmentalism.

Data collection, analysis and management

- The Advisor could closely collaborate with the Mission's analytical and reporting functions (e.g. JMAC, JOC, POC Unit, the Force and police components, etc.) to develop standardised approaches for collecting and analysing climate-related and environmental data. The priority would be to strengthen already existing analysis and reporting mechanisms and to draw linkages between relevant sections. For instance, the Advisor could foster information-sharing between JMAC and the Civil Affairs Division, the Force and the Police to feed local knowledge and expertise around climate security into analytical products. In this effort the Advisor will also need to work with planning and decision-making entities to foster cross-pollination and avoid duplication of efforts. Environmental and climate-sensitive analysis could also be systematically integrated into information-sharing and decision-making platforms, such as senior management meetings, diplomatic briefings, operations coordination teams, etc. The Advisor could also collaborate with relevant sections to integrate an environmental and climate lens into existing tools and products such as the Situational Awareness Geospatial Enterprise (SAGE), the Comprehensive Planning and Performance Assessment System (CPAS) and geographic information systems (GIS).
- The Advisor could also support the Mission's analytical and reporting capacity in collecting and integrating data and science (e.g. climate modelling, predictive analysis, environmental peacebuilding research, etc.) from secondary sources (e.g. UNCT, UN system, think tanks, academic, local organisations, etc).
- More systematic climate-sensitive data collection and analysis could result in the first integrated UN climate security assessment for Mali, and MINUSMA could be a key contributor for central and northern Mali.

Monitoring and Evaluation (M&E), awareness-raising and capacity-building

- In collaboration with relevant entities within and outside the UN system, the Advisor could assist in developing and delivering tailored learning materials, knowledge products and training that help to raise awareness and build capacities on climate security and environmental peacebuilding. Key target groups may include MINUSMA personnel, national security forces, government personnel, civil society, and humanitarian and development partners.
- The Advisor could strengthen MINUSMA's M&E capacities by making sure that climate security risks and environmental factors are incorporated into existing tools and mechanisms. Climate-sensitive M&E activities need to feed into decision-making and guide the Mission in safeguarding the 'Do No Harm' principle and in identifying and addressing unintended consequences of its interventions, including when financing projects.

Public information and advocacy

- The Advisor could support MINUSMA's outreach and public information services (SCPID) in raising awareness on climate security and environmental peacebuilding by including relevant outreach messages in communications, social media, press conferences and public documents.

Support the implementation of DOS Environment strategy

- The Advisor could support the Mission Support Division (MSD) in managing MINUSMA's environmental impact and by implementing the DOS Environment strategy by making sure that some indicators in the wider impact pillar are taken into account by the Mission (DOS, 2020). This would be in close collaboration with the Environment Unit, which is in charge of reporting yearly on the Mission's Environment scorecard and of coordination with the other pillars of the Environment strategy (Energy, Water, Waste and Environmental Management System), etc.
- The Advisor and the Environment Unit could collaborate in developing integrated approaches of how greening the Mission could interlink with environmental peacebuilding.

Additional considerations and risks

When deploying an environmental and climate security advisor, mission leaders and planners will need to take some specific considerations and risks into account:

- Mission personnel could perceive environmental and climate security as a burden that lacks relevance, or as a topic that is primarily driven by UNHQ or certain Member States. Some staff may therefore push back on the Advisor's mainstreaming efforts. Lack of understanding about the topic and its relevance amongst mission personnel would increase this risk. For this reason, communication and awareness-raising, driven by the Advisor as well as senior mission leaders and managers, could help to increase buy-in from mission personnel. Part of this effort should also be to clarify the role of the Advisor and the Environmental Unit.

- Another risk involves internal and external competition and the duplication of efforts. The Advisor should create synergies and break silos, rather than entering into competition with other mission sections or UN agencies who focus on the same thematic area. This risk may be especially relevant with regard to the UNCT, because some UN agencies are more familiar with and specialised in topics such as climate change, environment, natural resources, livelihoods security, disaster risk reduction, etc. The Advisor would need to avoid duplication of efforts and make sure that MINUSMA can fill knowledge gaps where others lack access or expertise. The DSRSG-RC-HC could play a key role in managing different roles and responsibilities. To avoid competition and duplication of efforts internal to the Mission, the Advisor should make sure that environmental and climate security are mainstreamed in the relevant sections, rather than taking full control over the topic. For example, instead of leading on data collection and analysis on environmental and climate-related issues, the Advisor should make sure that section such as JOC and JMAC collect and analyse relevant data, as well as systematically report on the topic.
- Interpersonal relationships often affect decision-making and mission management. With the Advisor operating in a highly visible and strategic role, s/he would need to have excellent interpersonal and diplomatic skills to mainstream environmental and climate security in all relevant mission entities.
- Given that environmental and climate risks and needs in Mali vary strongly by region and community, the Advisor should make sure that the Mission develops tailored responses by geographic area and affected community (e.g. herders, farmers, youth, women, etc.). While there are worrying trends in the south, the Mission's mandated priorities still lie in the north and the centre. As climate and environmental pressures are most impactful in rural areas, particularly in regions already affected by livelihoods insecurity and violence, the Advisor would need to gain in-depth understanding of the dynamics at different levels and in different regions. The Mission could therefore deploy the Advisor on regular field missions in critical areas to gather first-hand experience and knowledge. Nonetheless, regular presence at Mission HQ remains key for influencing decision-making.
- Given the many roles and responsibilities for the Advisor, there may be a risk that the workload would be too much for one person to carry. The Mission could therefore consider setting up a small team, similar to the Gender Unit. Experienced national staff could be ideal to support the Advisor, as they could provide more local knowledge and expertise.

Conclusion

Each stabilisation intervention in a conflict-affected or fragile setting has a responsibility to consider mainstreaming a climate and environmental lens into its operations while applying the 'Do No Harm' principle. Given the interconnectedness between climate change, environmental factors and stabilisation in Mali and the broader Sahel, this is especially critical for MINUSMA. While the Mission has addressed some environmental and climate-related security risks and continues to do so, they remain insufficiently mainstreamed at the Mission's strategic and operational level. There is an urgent need for the Mission to take environmental and climate security risks into account more systematically when designing, implementing, monitoring, evaluating and learning from its programmes and operations.

This paper proposed ways for MINUSMA to integrate environmental peacebuilding approaches, to coordinate and build partnerships, to enhance knowledge-sharing, awareness-raising and capacity-building, and finally also to reduce its own environmental impact. These efforts could be facilitated through the deployment of an environmental and climate security advisor, with a similar role and responsibilities as seen in other UN missions such as the United Nations Assistance Mission in Somalia (UNSOM).

Climate and environmental impacts in Mali should not be considered in isolation, but as deeply intertwined in a complex network of other, often more direct and more critical drivers of violent conflict. Mainstreaming environmental and climate security should be part of a holistic approach to stabilisation. It should not be used by MINSUMA to evade responsibility for addressing other risks, nor to justify one-sided, militarised approaches to POC in anticipation of rising environmental and climate-related insecurity. The Mission could therefore adopt a locally-informed, human-centred approach to environmental and climate security that takes into account different risks, needs and regional dynamics. Given the relative novelty of this topic to peacekeeping and within the wider UN system, MINUSMA could engage in an iterative process of inductive learning and adaptation.

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