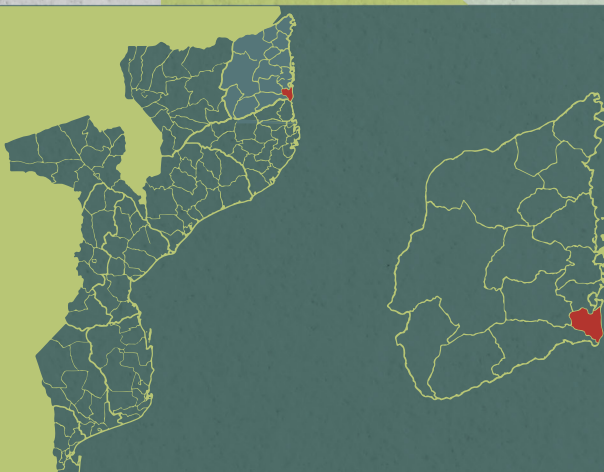


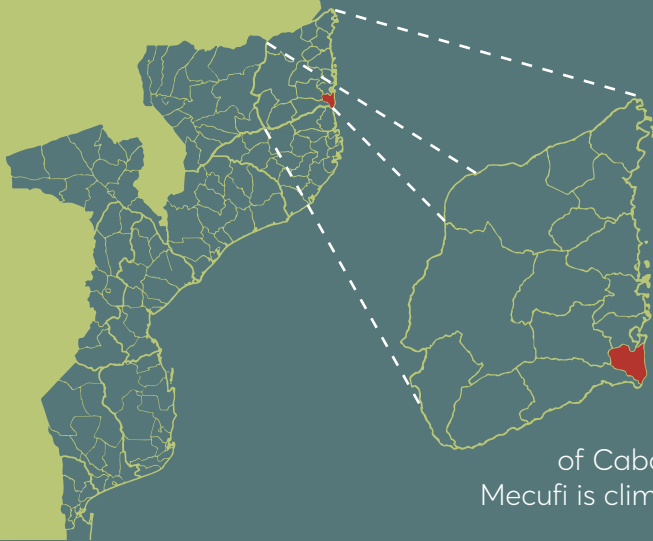
Localised Climate-Related Security Risk Assessment:

A Case Study in Mecufi District, Cabo Delgado, Mozambique

An overview of climate-related security risks with concrete solutions and recommendations on how to address them.



OVERVIEW



Credit: This Map of Mozambique is divided into provinces and districts. Cabo Delgado is the Northern coastal province, and the Mecufi district is highlighted in red. Mozambique National Institute of Statistics (INE)

Mozambique is a tropical country on the south-eastern coast of the African continent, with an extensive coastline of about 3,000 kilometres, where most of the Mozambican population is concentrated.

Mecufi is a district of Cabo Delgado province in Northern Mozambique, with a total area of 1.254 km². Since 2017, Mecufi's population has almost doubled from 61.531 inhabitants¹ to 114.482². There are two main reasons for such a population shift. First, internally displaced persons (IDPs) arrived in Mecufi due to insecurity in the northern districts of Cabo Delgado. Second, the movement of people within Mecufi is climate-induced.

Additionally, climate-related hazards such as droughts, floods, and cyclones are occurring with increasing frequency – to the extent that Mozambique was considered to be one of the countries most affected by extreme weather events in 2019³. Since 2019, Northern Mozambique has been hit by two cyclones, three tropical storms, and persistent flooding⁴.

The current situation has put pressure on state infrastructure and weakened the government's ability to address structural development problems and root causes of conflict and instability, such as inequality, marginalisation, and poverty. Further, unregulated salt production and climate-induced migration have produced a higher vulnerability of communities to weather-related disasters.

The present climate-related security risk assessment (henceforth, the risk assessment) applies GPPAC's Step-by-Step Guidance Note for Localising Climate, Peace and Security⁵ in Mecufi. It outlines the key climate-related security risks and shares key recommendations on how local peace actors, donors, and policy-makers can adjust their responses to climate-related security risks in order to improve peace and security in Mecufi.

1. Instituto Nacional de Estatística – INE, 2017, 'Recenseamento Geral da População e Habitação. Cabo Delgado, Quadro 3'. Available at: <http://www.ine.gov.mz/iv-rgph-2017/cabo-delgado/quadro-3-populacao-por-idade-segundo-area-de-residencia-distrito-e-sexo-provincia-de-cabo-delgado-2017.xlsx/view>

2. Instituto Nacional de Estatística – INE, 2021, 'Folheto Estatístico, Distrito de Mecufi'. Available at: http://www.ine.gov.mz/estatisticas/publicacoes/folheto-distrital/cabo-delgado/folheto-mecufi_2021.pdf/view?searchterm=Mecufi

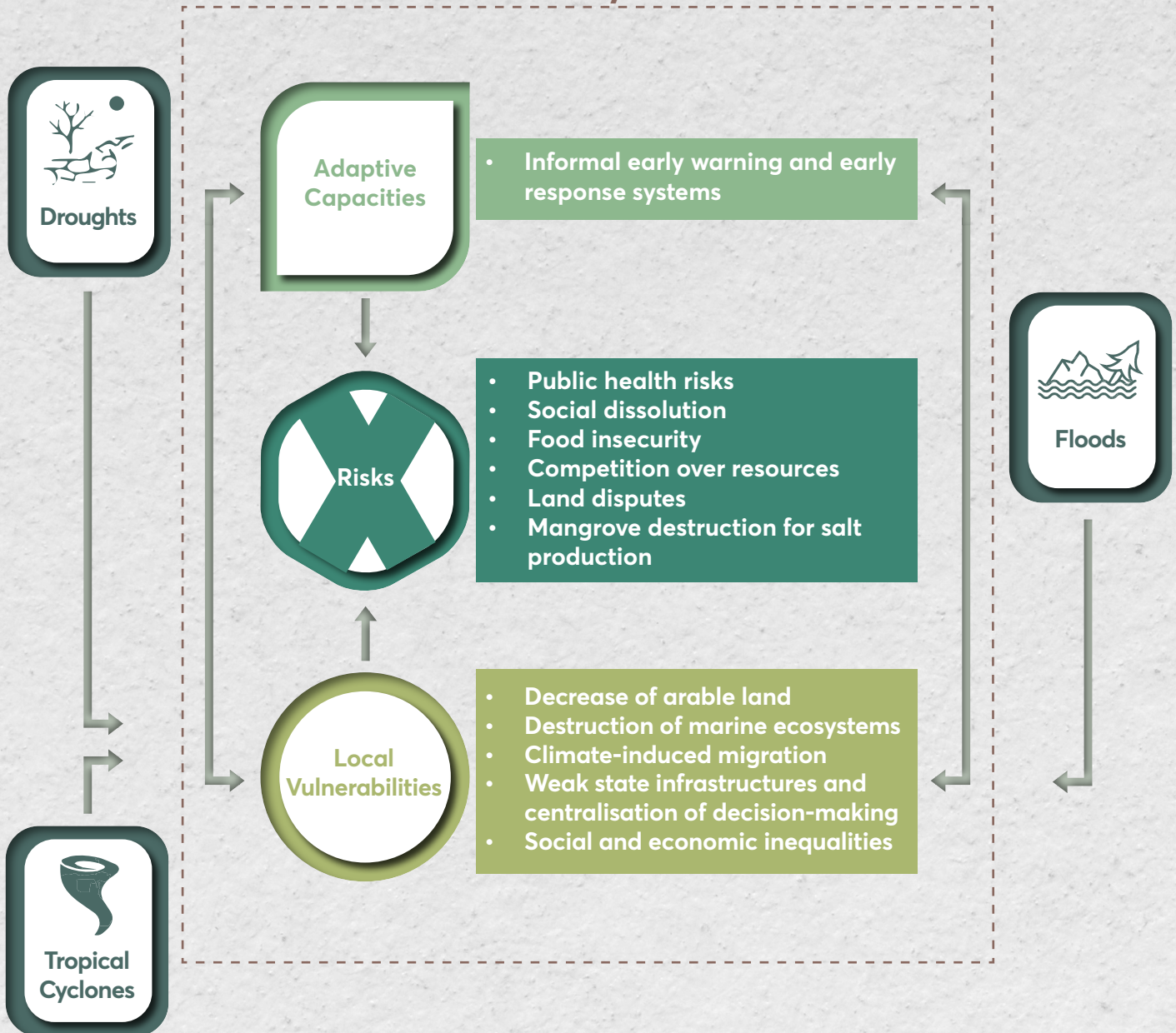
3. Global Climate Index, 2021, 'Who suffers more from extreme weather events?'. Available at: https://germanwatch.org/sites/default/files/Global%20Climate%20Risk%20Index%202021_2.pdf

4. OCHA, 2023, 'Mozambique Humanitarian Response Plan'. Available at: <https://reliefweb.int/report/mozambique/2023-mozambique-humanitarian-response-plan-february-2023>

5. The Guidance Note was developed on the basis of the toolbox developed by the UN Climate and Security Mechanism (UN CSM). See more, UN Climate and Security Mechanism, 2020, 'Checklist to help climate-proof political analysis'. Available at: https://dppa.un.org/sites/default/files/csm_toolbox-4-checklist.pdf

Interlinkages between Climate Change and Insecurity in Mecufi

Local Community Risk Scenario



Solutions:

- Decentralise decision-making on both climate and security matters
- Provide financial and technical support in the development of an inclusive climate, peace, and security strategy
- Address local vulnerabilities and increase adaptive capacities in a conflict-sensitive manner
- Promote and facilitate inter-ethnic and community dialogue
- Regulate the production of salt
- Promote sustainable income-generating activities

The Climate-Related Security Risk Assessment Process: Opportunities and Challenges

The inclusive and participatory design of the risk assessment in Mecufi enabled local government officials, traditional leaders, and community members – including climate experts and peacebuilders – to jointly work together to identify and develop plans to address climate-related security risks. The methodology for the risk assessment included focus group discussions⁶, open multi-stakeholder dialogues⁷, and surveys⁸ between December 2022 and February 2023. The risk assessment brought forward the following, not exhaustive, highlights:

STEP 01 UNDERSTANDING THE LINKS BETWEEN CLIMATE AND SECURITY:

Despite the existing and well-recognised climate change conditions prevailing in Mecufi, the understanding of climate-related security risks by all stakeholders operating at the local level required further strengthening⁹. As a first-ever project in Mozambique, this risk assessment provided a chance for an enhanced understanding of the connection between climate change and local fragility, as well as the roles of different stakeholders in improving peace and security in Mecufi and areas exposed to similar climate-related security risks. While it is hard to immediately assess the impact of the risk assessment on the local realities, involved stakeholders expressed their interest in using the local analysis of climate-related security risks in their respective work across the humanitarian, development and peace (Triple) nexus. They also asked to replicate such an assessment in other localities of Mozambique. See Step 1 in the [Guidance Note](#) for additional information.

STEP 02 UNITING KEY ACTORS AROUND A COMMON GOAL:

The risk assessment's inclusive, participatory, and multistakeholder design was based on the meaningful engagement of diverse stakeholders in co-designing the risk assessment. The process included local communities from Sambene, Muinde, Natuco, Muaria, Sassalane, Matecane, and Murrebue; the Mecufi government, including the Head of the District Government, the local department of the Ministry of Education and Human Development, the Department of Women, Health and Social Service, the Department of Planning and Infrastructure, and the Department of Civil Registration; as well as local civil society organisations working on peacebuilding, environmental protection and promotion of the sustainable use of natural resources, to collect relevant information. The Mecufi District Government was integral in carrying out the risk assessment. It ensured the direct involvement of the respective government entities in the risk assessment and enabled collaboration between local authorities and local communities to identify risks and potential solutions. See Step 2 in the [Guidance Note](#) for additional information.

6. Five (5) focus groups were set up with ten (10) diverse participants in each, grouped by various criteria such as gender and area of work or interest.

7. Open dialogues were held with communities where people freely participated and shared their perceptions and concerns about climate, peace, and security.

8. A questionnaire was also shared with 110 diverse stakeholders from ten (10) neighbourhoods of Mecufi to obtain more detailed and specific individual data.

9. Based on the risk assessment, more than 90% of survey participants pointed to a lower perception of climate risks; however, they unanimously agree that the district faces an increase in periods of drought, erratic rainfall, increased wildfires, increased flooding and flooding across the Megaruma River, and increased coastal erosion. This speaks to the lack of capacity to articulate linkages between climate impacts and various risks associated with such impacts.

STEP 03

DEVELOPING DATA COLLECTION AND ANALYSIS METHODS:

The data collection tools designed for the risk assessment were tailored to the context of Mecufi, marked by complexity and political sensitivity due to the ongoing conflict. Quantitative data collected through an anonymous 110 survey allowed for exploring perceptions and opinions that are sometimes too sensitive to be discussed in open public spaces. The nuanced reflections from focus group discussions and open dialogues guided the interpretation and analysis of this data. Local peacebuilders – who support an informal early warning and early response system under the African Union Political Affairs, Peace and Security (AU PAPS) the Continental Early Warning System (CEWS) Southern Africa Region¹⁰ – worked to integrate climate-related security risks into their CEWS incident reports. See Step 3 in the *Guidance Note* for additional information.

Climate-Related Security Risks in Mecufi

STEP 03 & 04

The following climate-related security risks and solutions are based on local perceptions and experiences collected through key informant interviews (KII), group discussions, and community surveys during the December 2022-March 2023 period: See Steps 3 and 4 in the *Guidance Note* for additional information.

TROPICAL CYCLONES → PUBLIC HEALTH RISKS & SOCIAL DISSOLUTION

Tropical cyclones result in public health risks and social dissolution: Cyclones are the most frequent extreme weather events affecting Mecufi. Resulting flooding in residential areas destroys housing and public infrastructure and increase vector-borne diseases and diseases caused by poor hygiene conditions, such as diarrhoea. These public health risks take the lives of thousands of people¹¹. In the absence of state interventions focusing on public health and climate change adaptation, rumours spread that the authorities play a role in the outbreak of communicable diseases, increasing a sense of insecurity within communities and sparking social unrest and protest¹².

10. With support from the United Nations Development (UNDP), and the African Union Political Affairs, Peace and Security (AU PAPS) the Continental Early Warning System (CEWS) Southern Africa Region is coordinated by the Southern African Partnership for the Prevention of Conflict (SAPPC). SAPPC directly supports the AU CEWS through data collection, analysis and early warning reporting to the AU's CEWS Department and relevant partners through its network of members informally at the local level.

11. Institute for Security Studies, 2023, 'Is Cyclone Freddy's record-breaking devastation the new normal?'. Available at: <https://issafrica.org/iss-today/is-cyclone-freddys-record-breaking-devastation-the-new-normal>

12. Epidemics are often perceived by the population as diseases caused by men and this has led to violence in Mozambique rural areas, including in Cabo Delgado, with the population accusing the local authorities of having brought cholera, sometimes causing aggression and even murdering the accused people. See more in Hanlon, J (2020). Cabo Delgado civil war: Refugees kill leader 'for bringing cholera'. Mozambique News reports & clippings, 2020, 'Refugees kill leader "for bringing cholera"'. Available at: https://www.open.ac.uk/technology/mozambique/sites/www.open.ac.uk.technology.mozambique/files/files/Mozambique_509-3Dec20_Cabo-Delgado_violence_land_mil-aid.pdf

FLOODS, CYCLONES & DROUGHT → FOOD INSECURITY & COMPETITION OVER RESOURCES & LAND DISPUTES

Drought contributes to food insecurity and increases competition over scarce resources and associated violence: As a result of increasing average temperatures, irregular rains, and heat waves, Mecufi faces the loss of arable land near coastal cities due to drought. This also puts pressure on ecosystems responsible for the productivity of marine fauna, complicating fishing practices and accessibility of basic food¹³ for the people of Mecufi. Food insecurity further contributes to the increased competition over scarce resources. Together with a variety of socio-economic inequalities¹⁴ such as massive unemployment of young people and poverty, people are left with opportunities connected with illicit and often violent activities.

Armed insurgency in northern Cabo Delgado leads to further competition over resources: The arrival of the thousands of external IDPs who sought refuge in Mecufi put additional pressure on already overburdened natural resources, public services, and livelihoods which were not prepared to receive thousands of people. This situation led to certain unsustainable practices in Mecufi, such as the devastation of mangroves – critical to ease the impacts of cyclones, floods, and coastal erosion – for salt production¹⁵. This situation is, in turn, generating conflicts between the government and the salt workers which, if not well managed, could escalate to violence.

Limited availability of arable land leads to land disputes: The destruction of soils caused by floods, tropical cyclones, and drought makes productive land scarcer, which has the potential to generate conflict and disputes over land with fertile soils for agriculture¹⁶. Until a few years ago, Mecufi was considered an 'untouched district', with much of the available arable land not yet occupied by communities. But the rapid degradation of soils, combined with the arrival of large numbers of IDPs, increased land occupation and use so drastically that local arable land may run out in a few years, leading to an increased risk of land disputes. Specifically, internal forced migration in Mecufi due to weather hazards could concurrently add more tension and lead to conflict among the native ethnic groups. It is often the case that politically and economically stronger groups take the best land for both habitation and cultivation at the expense of other groups.

13. According to experts, most aquatic animals are poikilothermic. Their body temperature depends on the temperature of the environment where they are, thus changes in temperature affect metabolism, growth, reproduction and susceptibility to toxins and diseases. As a result, their species are reproducing less and less.

14. Mozambique ranks 180 out of 189 in the Human Development Index (HDI) and an estimate 62 per cent of the population lives below the international poverty line. OCHA, 2020, 'Mozambique country profile'. Available at: <https://www.unocha.org/mozambique/about-ocha-mozambique>

15. Salt production is one of the main income-earning activities in Mecufi today, particularly for young people. See more International Union for Conservation of Nature, 2021, 'Mangrove Socioeconomic Evaluation and Conservation Framework in Mozambique'. Available at: <https://www.mangrovealliance.org/wp-content/uploads/2022/10/Mozambique-Technical-Report-v05-FINAL-WEB.pdf>

16. During the in-person focus groups discussions, participants avoided referring to the existence of conflicts caused by land disputes. However, in the individual questionnaires, 80% of the respondents mentioned that in their communities there were conflicts due to disputes over land for cultivation; 60% referred that there was conflict due to land disputes for housing; at least 20% of respondents said that disputes over land in their community have led to some form of violence.

Local Solutions and Concrete Avenues to Address Climate-Related Security Risks in Mecufi

STEP 04

The following solutions are based on the local analysis of climate and security risks, vulnerabilities, and adaptive capacities and provide concrete recommendations to specific actors best positioned to address respective risks. The list of solutions is not exhaustive, and some solutions require further feasibility studies for building a comprehensive infrastructure for addressing climate-related security risks in Mozambique. See *Step 4 in the [Guidance Note](#) for additional information.*

The government of Mozambique should decentralise decision-making on both climate and security matters: The interlinkages between climate change and fragility can only be addressed effectively if they are coordinated across traditional policy areas towards the development of a shared understanding of the contextual pathways through which climate change impacts security¹⁷. While Mozambique has the 2013–2035 National Strategy for Adaptation and Mitigation of Climate Change¹⁸ Mecufi specifically lacks resilient local infrastructure¹⁹ the availability of contingency plans²⁰ and has limited capacities of local authorities and community leaders. In order to strengthen responses, localised channels of decision-making are required with concrete mandates of local governments. Decentralised approaches could enable local governments to work with communities on identifying and addressing risks, including through existing informal CEWS systems²¹. The national government could also provide political support to strengthen CEWS early warning mechanism in Mozambique to inform national-level action on climate, peace, and security.

Development partners should provide financial and technical support for the development of an inclusive and localised climate, peace, and security strategy: The government of Mozambique should adopt a national climate, peace, and security strategy to guide the work of and encourage coordination between security and climate stakeholders, supported by concrete integrated programming, resourcing, and relevant

17. UN CSM, 2020, 'Climate Security Mechanism Toolbox - Conceptual Approach'. Available at: https://dppa.un.org/sites/default/files/csm_toolbox-2-conceptual_approach.pdf

18. Ministry for the Coordination of Environmental Action, 2012, 'National Strategy for Adaptation and Mitigation of Climate Change - 2013-2035'. Available at: <https://www.biofund.org.mz/wp-content/uploads/2017/03/Estrategia-Nac-Adaptacao-e-Mitigacao-Mudancas-Climaticas-2013-2025.pdf>

19. The risk assessment revealed that existing infrastructure has the potential to respond to risks; however, their effectiveness needs to be strengthened by giving local governments more decision-making power to solve local problems, including the climate risks.

20. During the risk assessment, the Government of Mecufi confirmed that there is no specific technical capacity for mitigation and adaptation to the effects of climate change.

21. The African Union and UN Development Programme, in partnership with the Southern African Partnership for the Prevention of Conflict (SAPPC), has been providing technical support to the local early warning data collectors in Mozambique to inform the Continental Early Warning System (CEWS).

regional and international partnerships. Such a strategy can include, but is not limited to, the following considerations:

- First, a comprehensive conflict analysis should be integrated into the design and implementation of such a strategy to fully reflect local and regional conflict dynamics.
- Second, the engagement of affected local communities is paramount as local communities are usually best placed to identify conflict risks and potential solutions and to provide feedback on the impact of climate interventions on conflict dynamics. This could include integrating local communities in local decision-making, supporting informal early warning data collection mechanisms, raising awareness of community leaders about the link between climate and security, and building local capacities for disaster risk reduction management.
- Third, combining interventions focused on governance, mediation, and dialogue with more technical climate change adaptation activities can rebalance efforts toward the greatest needs and optimise impact.
- Fourth, a holistic strategy should also provide long-term support to the community to ensure the protection of their environment alongside their economy. Investment into contextually productive sectors – such as agriculture, aquaponics, and salt production in Mecufi – can multiply value.

The national government should address local vulnerabilities and increase adaptive capacities in a conflict-sensitive manner:

This includes the following:

- *Sanitation:* The national government, in particular, the Department of Urban Development, with the support of international development partners, can improve sanitation in communities.
- *Resilient housing:* The national government could further allocate resources to build resilient houses, raise awareness among communities to build houses in highlands, prohibit construction in areas prone to flooding, and mandate using materials that are more resistant to winds and heavy rains.
- *Artisan Fishing:* The national government and development partners could support fisherfolk with equipment and training to practice semi-industrial fishing on high seas, where more fish is available. The fisherfolk's communities should be enabled and incentivised to organise themselves in cooperatives or associations, through which they can work together to address their challenges related to climate-related security risks.
- *Support for IDPs:* The national government should liaise with development partners to provide more essential assistance to the IDPs such as food, shelter, and medicines while including the hosting communities in designing and delivering these goods.
- *Food assistance:* The national government and development partners could provide food assistance to the most vulnerable communities affected by extreme weather events to reduce the immediate effects, and introduce new production techniques to increase productivity, such as novel irrigation and the use of organic fertilisers, and crops that are resilient to extreme weather events such as floods, prolonged droughts, and strong winds.
- *Land conservation:* Agricultural managers and associations can also be established to train people to conserve land and increase soil stability.

The local government could promote and facilitate inter-ethnic and community dialogue. Consistent dialogue can reduce traditional tensions and potentially generate synergistic ties that can permanently reduce them over time. On the community level, this could help local community actors understand the causes of low land productivity and develop cooperative ways to solve common problems through processes like this risk assessment. On the leadership level, the local government could encourage inter-ethnic dialogue between the leaderships of different ethnic groups within Mecufi to promote resource sharing and peaceful conflict resolution. At the same time, the local government should avoid resettling displaced people without prior consultation with the native ethnic groups. Similar dialogue between IDPs and the host communities is required, especially on resource use and sharing.

The local government could regulate the production of salt. The local government can start pre-emptive negotiations with salt workers to encourage salt production for income generation while also requiring training to do so without devastating the mangroves. This can be done by mobilising funds to teach and enable improved salt drying techniques that require less space, cause less environmental damage, and provide higher returns for salt workers and the community. Additionally, enabling local communities to restore and increase mangrove cover, protect green areas, and build barriers along the seafront that can halt coastal erosion and increase economic opportunities. Further feasibility studies are required to develop clear avenues to regulate the production of salt.

The local government and development partners should promote sustainable income-generating activities. In the short term, fish farming could be promoted so that fishing communities can raise fish, reduce intensive fishing and compensate for fish shortages. In the medium and long term, the government could support the transformation of the current widely practised artisanal fishing to semi-industrial fishing, providing boats and fishing nets to improve fish capture as well as cold storage systems for fish preservation. This may help generate income for the local youth, primarily engaged in wood extraction, charcoal production, or salt production.

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