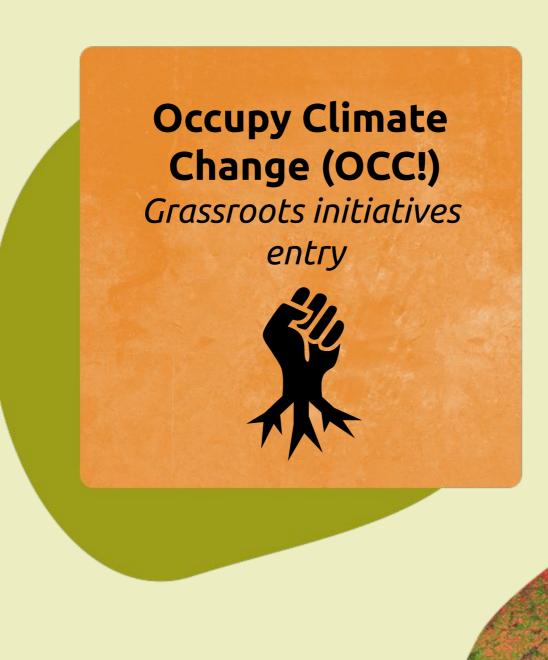
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ENVIRONMENTAL HUMANITIES LABORATORY





Enhancing coastal and marine socio-ecological resilience and biodiversity conservation in Cabo Delgado

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Mozambique has one of Africa's longest coastlines and communities facing climate and human-related challenges. The government has established specific ministries to coordinate environmental issues—the Ministry for Environmental Coordination, which was renamed the Ministry for Environment in 2020—as well as agencies such as the National Institute for Natural Calamities to implement emergency responses. In 2019, cyclones Kenneth and Idai hit Mozambique's central and northern regions, igniting already ongoing debates about the country's preparedness to deal with climate change in general and natural disasters in particular. These events have left devastation in their wake and exposed environmental and social vulnerabilities linked to climate or human-related treats.

However, in addition to government ministries and agencies, there have been community initiatives that predate the current government's efforts to combat climate change. Communities have been displaced in the northern coastal communities of Mozambique's Cabo Delgado Province because of a war that began in 2017 but became more visible in 2020 with more systematic attacks on civilians and intervention by other countries.

In the midst of an ongoing war, the long-term effects of natural disasters, and an influx of internally displaced people, I seek to understand how community-based organizations in the Northern Province of Cabo Delgado have dealt with climate change and what initiatives they have put in place to address natural resource management and environmental education. As a result, in order to understand local climate change initiatives, I will focus on AMA (Associação

Amigos do Meio Ambiente), a Mozambican non-governmental organization based in Cabo Delgado Province. The main questions are as follows:

- What specific aspects of climate change has the organization addressed? Is it a case of mitigation, adaptation, or both? Is it concerned with other aspects of climate change?
- What steps has the organization taken to address climate change?

Location:

The Ama-Associação do Meio Ambiente initiative on climate change mitigation and adaptation is being implemented in Mecufi and Bandar, both in Mozambique's Cabo Delgado Province.

Background and promoters:

Ama has been is implementing a climate change adaptation and mitigation initiative in six coastal villages in Mozambique's Mecufi district: Muitua, Murrebue, Maueia, Ngoma, Muinde, and Natuco. One of their main sources of income is artisanal fishing; another is agriculture. The initiative is a component of the project *Enhancing coastal and marine socio-ecological resilience and biodiversity conservation in the Western Indian Ocean* (Ama, 2022).

Ama was established on May 19, 1990, as NUMA (Núcleo do Meio Ambiente) in the City of Pemba, Province of Cabo Delgado, and was recognized and authorized to operate by the Governor of the Province on January 31, 1991. This organization was founded by a group of young people motivated by a desire to protect environmental resources harmed by erosion, indiscriminate forest clearing, and the slaughter of protected species of animals (AMA, 2016, p.3).

Beneficiaries:

According to reports, the initiative aims to improve the livelihoods of coastal communities in Cabo Delgado Province that are being impacted by climate change in two ways: increased fishing challenges and challenges in developing other sources of income. As a result, fishermen, community fishing councils (CCPs), and grupos de viveiristas [nursery groups] are the primary beneficiaries of the initiatives (Ama, 2022; Ama, 2021).

Engagement with climate change:

Over time, communities have reported that marine and fishing resources have become increasingly scarce. In collaboration with community savings and loan associations, the initiative focuses on mangrove restoration and livelihoods (ACPEs). This initiative trained ACPEs members in small businesses so that they could diversify their income and improve their living conditions. During the Mangal's restoration, a group of nurserymen in Muinde was formed with the primary goal of producing seedlings and planting mangroves in their region (Ama, 2022).

This initiative has also educated community councils on the basics of identifying protected species and the value of co-management plans in their communities. The initiative focuses on biodiversity conservation and protection, as well as community participation in coastal protection. As a result, this initiative has addressed both climate change mitigation and adaptation.

Values and objectives:

Environmental education, environmental preservation, ecosystem defense and protection, the protection of endangered species, and the enhancement of animal, plant, and microbial life for ecosystem balance are the primary values. The main objectives of the initiatives are:

- Involvement of women in the co-management of marine resources.
- Strengthening the community's savings capacity.
- Strengthening the capacity to raise funds through payments for ecosystem services.
- Recovery of degraded areas through the planting of mangroves
- Provision of alternative means of subsistence.

Timeline:

In 2019, AMA began implementing the initiatives. The project will run from 2019 to 2023.

Visible Effects:

Community councils and community savings and loan associations have begun to save and establish small businesses. Furthermore, they have grown and planted seedlings. Crab fattening has spread throughout communities (Ama, 2022; Ama, 2021).

The initiative has also created two co-management plans and submitted them to the Ministry of Sea, Inland Waters, and Fishing (MIMAIP) for approval (Ama, 2022).

Actors involved:

Communities, Ama, and district governments are the main actors.

Limits:

There are two major constraints to the initiative:

- First, the initiative is being implemented in the coastal districts of Cabo Delgado Province, with a particular emphasis on the District of Mecúfi. Ama is a non-profit organization. As a result, the initiative is well located and limited in scope in terms of geographic scope. That is, it does not include other coastal districts.
- Second, increasing the initiative's institutional capacity in terms of human resources and community support is required.

The initiative has two major constraints:

- First, the initiative is being implemented in the coastal districts of Cabo Delgado Province, with a focus on the District of Mecúfi in particular. Ama is a service organization. As a result, in terms of geographic scope, the initiative is well located and limited in scope. That is, it excludes other coastal districts.
- Second, expanding the initiative necessitates an increase in Ama's institutional capacity in terms of human resources and community support.
- Finally, the ongoing-armed conflict in Cabo Delgado Province makes it difficult to expand the initiative. As a result, one of the primary concerns is security.

Critical Points:

- For example, in activities such as crab fattening, one of the critical points is community ownership (Ama, 2021, p. 3).
- The ongoing-armed conflict in Cabo Delgado Province has raised security concerns and hampered the initiative's growth. As a result, the initiatives are in jeopardy.

Replicability:

Organizations in the Mozambican provinces of Inhambane, Nampula, and Maputo have expressed interest in replicating the initiative. Countries interested in replicating the initiative include Seychelles, Kenya, and Tanzania.

Broader changes

AMA has been advocating for the recognition of fishing rights by Community Fisheries Councils (CCPs). Two laws were revised, namely the Biodiversity Conservation Law and the Fisheries Law. These laws already include fishing rights for CCPs.

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