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Mikoko Pamoja

Carbon credits and community-based reforestation in Kenya's mangroves

Background

Mikoko Pamoja (MP) – "Mangroves Together" in Swahili – is a mangrove conservation and restoration initiative centred in Gazi Bay on Kenya's south coast. It aims to provide long-term incentives for mangrove protection and restoration, through community involvement and shared benefits. It's the first community-led project of its kind in the world to sell carbon credits from mangrove conservation and reforestation, and as such, it's attained significant international attention, acclaim and support.

The project is built on over two decades of high-level research conducted by Kenyan and foreign researchers, which led to the establishment of baseline socio-ecological elements for the project area in 2010.

The initiative brings together volunteers from two villages (Gazi and Makongeni), strategic partners, and a technical team from the Kenya Forest Service (KFS), Kenya Marine and Fisheries Research Institute (KMFRI), and Edinburgh Napier University, among others. MP sits under the umbrella of the

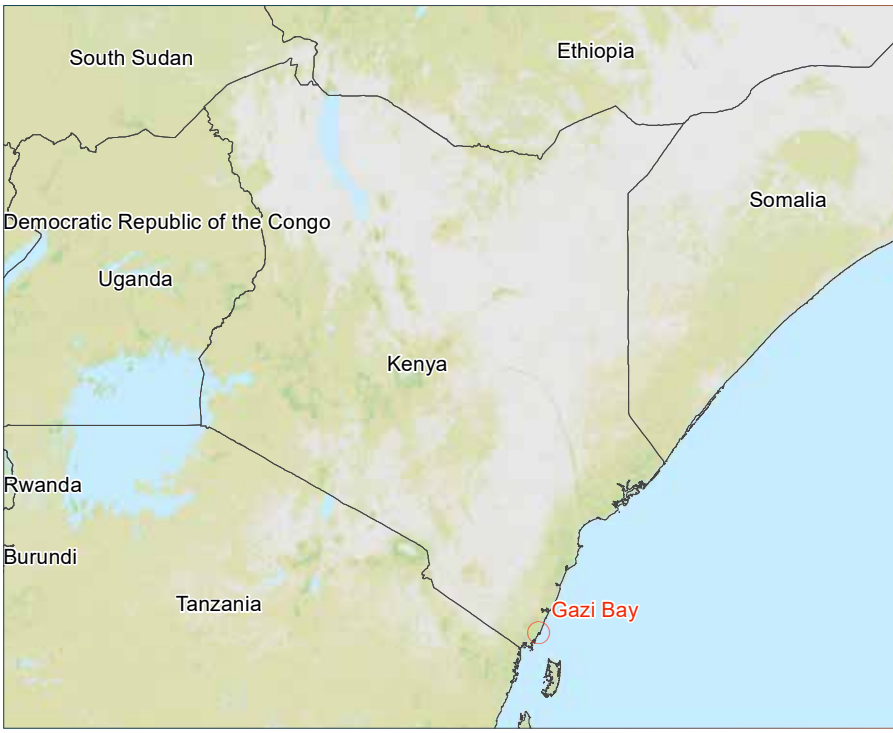

Figure 1. Location of Mikoko Pamoja project.

local Gogoni Gazi Community Forest Association, which grants communities user rights to co-manage the forests alongside the KFS.

Together, these actors have committed to conserve 117 hectares of mangroves – about 20% of the entire forest – and restore 0.4 hectares of degraded forest every year for a period of 20 years, which involves planting and protecting approximately 4000 seedlings annually.

The project has been accredited under the Plan Vivo carbon finance system and standards to sell 3,000 tonnes of C02 to the international market per year for a period of twenty years, beginning in 2013. The money earned from carbon crediting (USD$12,000 per annum) is invested in community development projects in education, water and sanitation, as well as enhancing the mangrove ecosystem itself.

The scheme provides the two villages with a reliable annual income to spend on developing their communities' infrastructure and boosting social development. Decisions on funding are democratic and transparent: when MP receives carbon payouts, all community members are invited to a meeting to decide how they want the money to be spent. Projects so far have included piping clean water into the villages from a bore, renovating school classrooms, providing textbooks for children in the community, and running environmental education programs.

Perspectives on success

Reforestation is a lot of work, and the community members involved are volunteers. Why bother? As resident and MP secretary Afusa Mohamed Zuga explains, people have become motivated through the prompt payoffs for community development, and new understandings about the role of mangroves in conserving fisheries, since fishing is the main economic activity in the villages.

Zuga says that the water and sanitation infrastructure provided by the project has made a particularly large difference to her and other women in the community. "We used to have to go quite far looking for water, and sometimes we had to buy it," she recalls. "Now the water is in the house, so we have more time for doing other things."

The investments in education have also had a positive impact. "Here in this part of Africa, our children's education depends a lot on us women," she states. "So when a child is chased away from school because they don't have the textbooks, it's us who find ways to buy the books, through our small-scale businesses."

"But Mikoko Pamoja has brought more than 600 books for the kids here, so it's a real benefit for us women." Project coordinator and local resident Josphat Mtwana speaks passionately about the environmental education programs that MP have been able to run, and his hopes that young people growing up in the community will see conservation work as a valuable, enriching and inspiring part of their future.

"It's funny: if you ask a little kid what they want to be when they grow up, they might say an engineer or a pilot, because they want to associate themselves with the high-ranking technical jobs," he laughs. "But we have conservation role models like Wangari Maathai who they could aspire to be like, too."

As such, MP involves young people in conservation through activities like the international Mangrove Action Project art competition, community-wide beach clean-ups, and celebrations for events like the International Day for the Conservation of Mangroves, World Oceans Day and World Environment Day.

Mtwana attributes the project's success to its comprehensive research base; strong government commitment to co-management of forest resources with communities; unprecedented community support; and the inclusive, transparent and communicative approach to decision-making, financial expenditure and conflict resolution.

> **"We used to have to go quite far looking for water, and sometimes we had to buy it for high prices. Now the water is in the house, so we have more time for doing other things."**
>
> – Afusa Zuga
> Community member and Mikoko Pamoja secretary

Challenges

Getting the community on board with the project was not an easy task, says Mtwana. Many people depend directly on the mangroves in their daily lives, so asking them to limit their exploitation of the resource was controversial.

“When a local sees a mangrove tree, they see a pole, or they see firewood,” he explains. “And if you tell them that by conserving mangroves they will promote fisheries, they will say “no, we don’t fish in the mangroves, we fish in the open sea”. So influencing these kinds of beliefs was challenging to say the least.”

Initially, there was also a lot of misunderstanding about how carbon crediting works: “The first question that comes into people’s minds is, “how will you be harvesting this carbon dioxide? You will be taking away all of the mangroves”,” says Mtwana.

When they’d grasped the concept, community members were also legitimately concerned that they might not be able to access the mangroves any more, so it was important to highlight the sustainable harvest rights that they would maintain, describes Mtwana.

But illegal harvesting still poses a challenge. As such, MP is now working to delineate clearer boundaries for project areas, and has built a watchtower and employed two scouts to keep an eye out for infringements.

Increasing sedimentation in some of the reforestation sites is also a concern, because mangroves are very sensitive to slight changes in physical conditions. As a result, MP has been unable to meet its replanting targets for the past two years.

Photo 1. Planting mangroves in Gazi Bay.

Scaling up?

There are ongoing efforts to replicate MP in other parts of the Kenyan coastline, such as in the village of Vanga near the Tanzanian border.

To grow this work, building community-level expertise is an important piece of the puzzle, says Mtwana. “We need to equip the local community with the skills and the science of how to do carbon accounting and certification.”

It’s also necessary to find ways to reduce the pressure on mangroves to meet community timber and fuelwood needs, such as through the cultivation of other fast-growing species like casuarina, he says. In addition, the introduction of energy-efficient cook-stoves is also expected to reduce fuel-wood consumption while at the same time have health benefits especially for women and children.

National-level policy change is key, too. Currently, mangroves are not included in Kenya’s Nationally Determined Contributions (NDCs) to climate-change mitigation as agreed under the United Nations’ Framework Convention on Climate Change (UNFCCC).

“Mangroves are sometimes considered a bit like wastelands,” explains Mtwana. “But we know now that they’re very very important. They’re some of the most efficient carbon sinks around. So we need a change in policies, to give mangroves the same importance as terrestrial ecosystems,” he says.

Story was developed by Esther Mwangi (CIFOR) and Monica Evans
Photos by Mikoko Pamoja

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