

Promoting sustainable coastal management through participatory conservation approaches in Timor-Leste

Reporting period: 1 September 2018 - 30 September 2019

Summary

The project activities took place in Ma'abat, a coastal village in Manatuto city, two hours east of Timor-Leste's capital city, Dili. A locally managed marine protected area (LMMA) was previously established in nearby Lamsana Bay, but was unsuccessful due to low community engagement in designing and implementing management measures. To address this, the project focused on promoting community engagement in marine resource management, building a positive relationship with the community of Ma'abat through a variety of participatory initiatives.

- The project's biggest success was the establishment of an all-female community-based fisheries monitoring (CFM) programme. Six local women completed a training programme in participatory fisheries monitoring techniques and are now collecting fisheries data needed to design management measures.
- A peer-to-peer learning exchange between the CFM teams from three sites sparked great enthusiasm for marine management in the newer Ma'abat team, who went on to share their learning and experience with the wider community.
- Community consultations to revive the *Tara Bandu* (local customary laws used for natural resource management) that previously protected Lamsana Bay started with the support of local authorities.
- An assessment of the potential for mangrove reforestation resulted in one target site being identified.
- Preliminary community discussions about alternative livelihoods led to the development of business proposals for chicken farming and salt-making.

Deliverables

Key community consultations and meetings

The project team engaged the Ma'abat community in a series of meetings to discuss their support needs and aspirations for marine management. Our regular interaction with a broad range of stakeholders, including local authorities, spiritual leaders and fishers, identified the challenges to achieving the community's goals for marine management, but most importantly contributed to building a solid relationship with the community of Ma'abat.

Four community meetings were held in August, September and December 2018, and March 2019, with village chiefs (*xefi suco*), fishers, representatives from the Ministry of Agriculture and Fisheries (MAF), the Partnerships in Environmental Management for the Seas of East Asia Integrated Coastal Management (PEMSEA-ICM) task team, the Oriental University of Timor Lorosa'e (UNITAL) and Blue Ventures. These meetings focused on the revitalisation of the LMMA in Lamsana Bay, how to support the community in the design of new management measures, and how to navigate the sacred nature of the bay.

Following meetings in Dili with Konservasaun Flora no Fauna (KFF), a Timorese NGO working in mangrove conservation, a site visit was held in February 2019 to discuss mangrove conservation with community representatives and assess the feasibility of a reforestation initiative. A site to pilot reforestation was selected based on community input and ecological observations made by KFF as the result of the visit.

A community fisheries monitoring (CFM) group was established and trained in February 2019. Following the training, regular meetings were held with the CFMs (five visits in February, March, May, August and September 2019), in order to provide ongoing support to the team. A learning exchange between the Ma'abat CFM team and the CFM teams in Behau and Atauro was held in Beloi, Atauro, in July 2019.

Marine management and *Tara Bandu*

The initial focus for marine management was on Lamsana Bay, a site traditionally regarded as sacred land that was formalised as an LMMA using *Tara Bandu* in 2012. Due to a lack of community engagement in the *Tara Bandu* process, however, the LMMA failed to be recognised by fishers and in recent years Lamsana Bay's fisheries started to be exploited illegally.

The project team held initial meetings to discuss revitalising the lapsed *Tara Bandu*, receiving positive feedback from community members who welcomed the support offered in monitoring and managing the natural resources of Lamsana Bay. The project team was initially advised that a new *Tara Bandu* ceremony was required prior to beginning any new marine management in the area. However, beside Ma'abat, three additional villages of Manatuto city (Ailili, Sau and Aiteas) have access to Lamsana Bay, which complicated the consultation process. In 2012, only two of the four village's spiritual leaders were involved in the *Tara Bandu* development and declaration process, which resulted in political feuds between the local administration and the spiritual leaders, who were found to be in disagreement on what management actions were considered appropriate for Lamsana Bay. As we progressed through consultations, it became clear that the community was hesitant to undertake any activities involved in renewing the *Tara Bandu* due to this conflict and the sacred nature of the site. This led to the local authorities asking us to suspend consultations temporarily on marine management until the appropriate process was identified by the community leadership.



Figure 1. Community meeting to discuss marine management.

Given these complications, it became clear that in order to be trusted as a partner to support community-led marine management, we needed to build a deeper relationship and trust with the community. We decided to pursue this through the CFM programme, and promote their role as ambassadors for marine management in the community. Our relationship with the community is growing and we expect discussions about marine management in the area to reprise in the coming months.

Fisheries monitoring programme

A fisheries monitoring programme, engaging six community women in collecting data on fish catches, was started in February 2019 and is producing vital data, which will be used to inform the management of marine resources in Ma'abat. A training programme, covering the methodology, fish ID, and engagement with fishers, was delivered in February 2019, and was followed by field sessions to practise the methodology. Regular meetings were held throughout the project to continue supporting the team.

The data collectors use smartphones with the [Open Data Kit](#) application to collect catch data from fishers at two key landing sites in Ma'abat. The survey was developed using a participatory process with the CFM team members and is regularly adapted to their needs (e.g. by changing the survey schedule and expanding the list of surveyed species). The survey includes questions designed to collect data that will allow us to better understand Ma'abat's fisheries (e.g. fishing effort, catch composition, and catch size), and to develop targeted measures that will ensure they are managed sustainably.

The CFM team is collecting data several times a week, and a data sharing session will be held in Ma'abat in October 2019 to ensure the community has access to data on their marine resources and to continue discussions on marine management. By directly involving women, the programme is promoting female leadership and addressing the marginal role women have traditionally played in natural resource management in Timor-Leste. Thanks to regular discussions on marine management with our team, the CFM team have started to share their experiences and views independently, within their community, promoting the idea of *Tara Bandu* and trust in Blue Ventures in the community.

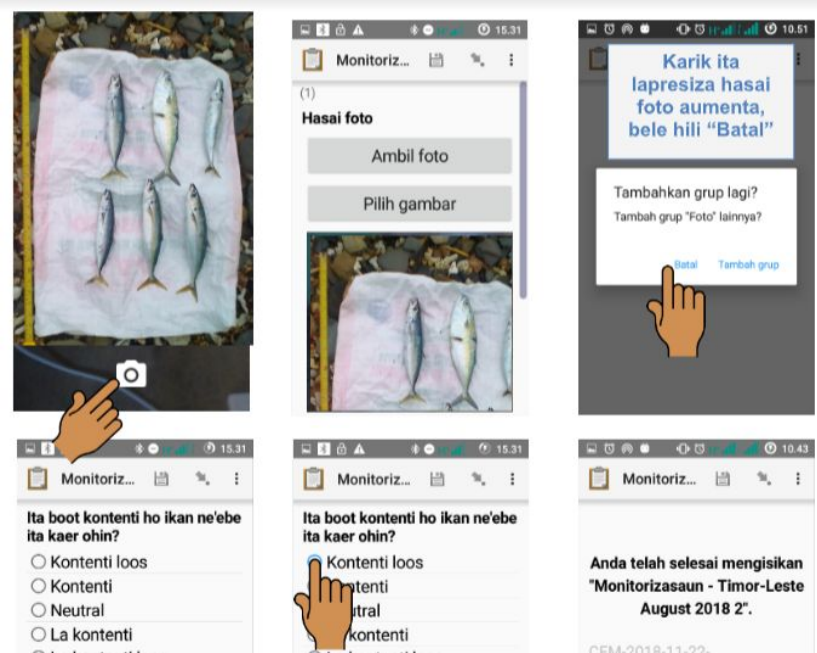


Figure 2: Open Data Kit survey interface for collecting fisheries data.



Figures 3 and 4: CFM operators collecting catch data with local fisherwomen.

Livelihood pilot

In order to reduce dependence on fisheries and build resilience in the community, several alternative livelihood options were considered for development. Community input was collected during early meetings in 2018, and pointed at chicken farming as a suitable option. However, due to the community's complex political situation, we were advised by the local authorities to put the development of chicken farming on hold until March 2019, when we received the go-ahead to continue this work.

The project team decided that any livelihood initiatives should also include Balak, a site in Ma'abat also identified as a possible mangrove conservation target site, to ensure a clear connection is established between the livelihood work and conservation efforts. In preparation for the development of the alternative livelihood initiative, we invited the Balak community members and Ma'abat stakeholders to a community meeting, where chicken farming, improved sea salt production, and tilapia and mudcrab farming were discussed as possible alternative livelihoods.

Following the meeting, we received a proposal from Manatuto from a multi-village group (*xefi suco* of Ailili, Ma'abat, Sau and the Administrator of Manatuto) for a chicken farm with a budget of \$10,000, which included a list of 30 Balak community members as beneficiaries. We asked UNITAL to prepare a counterproposal for the same chicken farm, which had a budget of \$7500. The second proposal, as with the Manatuto proposal, was not economically viable as a long-term business model, as it was based on keeping 104 chickens and selling 27 per month, which would not cover monthly running costs.

As PEMSEA has the capacity and budget to fully fund a livelihood initiative in Ma'abat, the project team decided not to proceed further with scoping of livelihood models as part of the joint Lighthouse Foundation pilot project, but to discuss with PEMSEA the opportunity of them taking the lead on developing alternative livelihoods in coordination with Blue Ventures, such as sea salt farming.

Reforestation

A mangrove reforestation initiative was assessed during the project, thanks to a new partnership established with KFF, a Timorese NGO working on coastal habitats. As part of our Memorandum of Understanding, we committed to train seven KFF members in the Reef Check monitoring methodology, and KFF agreed to provide technical support for mangrove reforestation in Ma'abat.

Several mangrove sites can be found in Ma'abat, and reforestation initiatives were previously undertaken in the area. These have unfortunately failed, so the project team put great effort in ensuring the right site and methodology were identified. Two sites were proposed for mangrove reforestation at the second community meeting (see figure 5); a site at Lamsana Bay (site 1), and one in Balak (site 2), which is closer to Ma'abat village and where mangroves are exploited more. The community agreed to develop fisheries monitoring and mangrove reforestation in both sites. In February 2019, the project team and KFF held a field visit to assess both sites' viability for mangrove reforestation. Upon assessment, KFF identified Balak as the most suitable site, and proposed a participatory, community-led reforestation plan, which will be implemented in the second half of 2019.



Figure 5: The two proposed sites for mangrove reforestation.

Following the visit, KFF suggested that previous reforestation efforts failed because the seedlings were planted in the sea where they suffered too much pressure from the waves, and therefore suggested seeds should be planted higher up the shore with a pipe to protect them until they are big enough to withstand the waves. Mangrove species at Balak include *Sonneratia alba*, *Rhizophora apiculata*, *Rhizophora stylosa* and *Ceriops tagal*.

Separately from, but in coordination with this project, PEMSEA and UNITAL provided the community with 20 seedlings of *Tabebuia rosea* (rosy trumpet tree) to plant trees for conservation purposes and coastal protection, which were well received. The benefits of planting mangroves will be discussed at a community awareness event in October 2019 to scope interest in a participatory mangrove reforestation initiative in Balak.

Exchanges

In July 2019, a peer learning exchange trip brought together 20 data collectors from the Blue Ventures fisheries monitoring sites of Behau, Atauro and Ma'abat. The exchange allowed the data collectors to learn from, and share experiences with the other monitoring teams. This is something they requested and has proven to be really valuable in the past as a tool to catalyse interest and enthusiasm for wider marine management.



Figure 6: Data collectors at the peer-to-peer learning exchange.

The exchange consisted of practical, interactive and creative ways of thinking about marine management to suggest ways these could be applied in their own communities. Highlights included getting to know each other, telling stories to explore the links between people, awareness raising activities about the links between health and the environment, and song writing about marine conservation. Following the exchange, data collectors showed an increase in confidence, and the teams are planning to conduct several outreach activities to engage more community members in fisheries monitoring and management.



Figure 7: Data collectors discussing community health and environment issues.

Challenges

Due to the complex political situation and the history in Ma'abat and specifically Lamsana Bay, the main challenge was to build a relationship with the community. The community had reservations about working with NGOs, due to previous negative experiences, and therefore building trust required time and effort. Our project team's approach of designing and implementing the activities in partnership with community members takes time but ensures initiatives are sustainable, as they empower the community to lead on managing their own marine resources in the future.

The remoteness of Ma'abat, and in particular Lamsana Bay, affected the project activities, as it resulted in field visits requiring complicated logistics, considerable expenses and coordination between local partners. Although the village lies only two hours east of Dili, the poor conditions of the road to Ma'abat, especially during the rainy season, require careful planning and the use of 4x4 vehicles. To overcome this we tried to coordinate and coincide visits with visits for other Blue Ventures and PEMSEA activities in the area to share costs.

Next steps

During this first year, the project team has developed a solid foundation for the development and implementation of community-led marine management measures. The project team built positive relationships with the local authorities and created the CFM team, which will be the gateway to engaging the wider community. In order to continue promoting trust with the community and their engagement in marine management, over the next year the project team will organise outreach activities such as film nights and mangrove planting, facilitate more exchanges with other communities using *Tara Bandu*, and continue to support the CFM team. In parallel, the project team will continue to engage with the community leadership, both administrative and spiritual, in order to discuss how to best support the Ma'abat community in developing and implementing *Tara Bandu*.