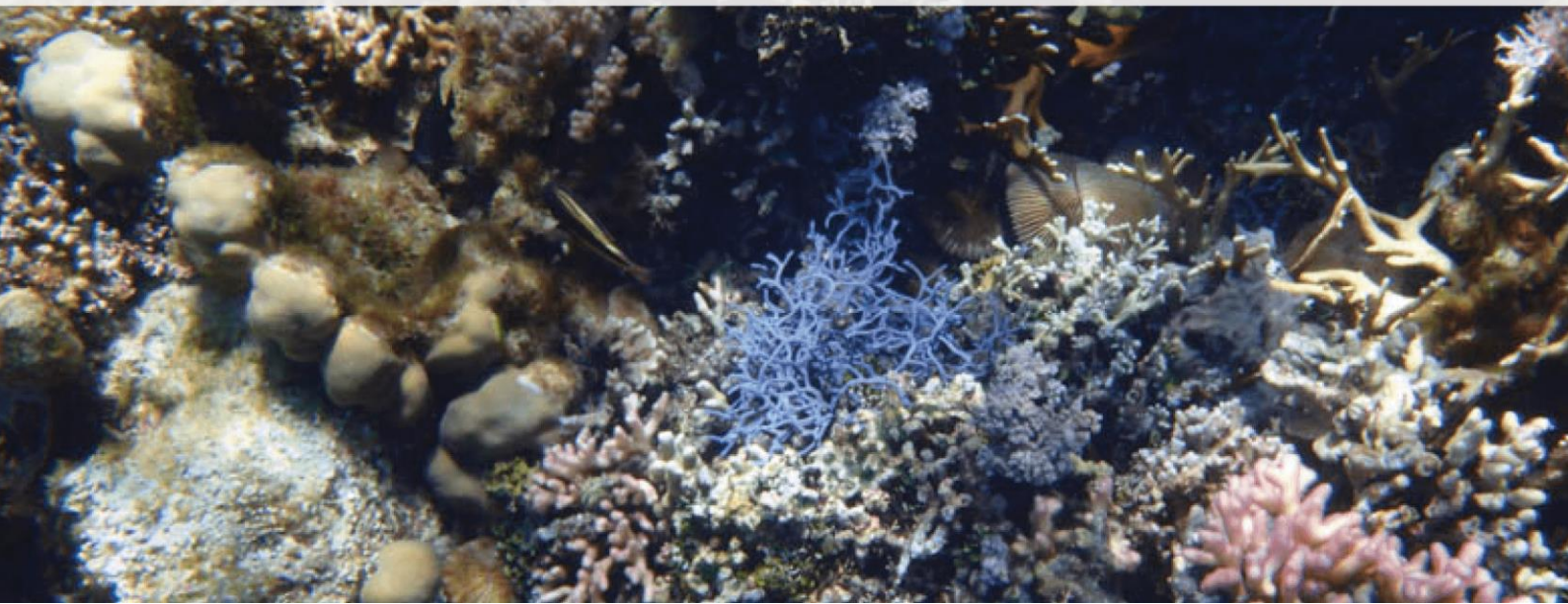




USAID
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ATAÚRO ISLAND Sustainable Management Plan



ATAÚRO ISLAND: Sustainable Management Plan

Produced by the United States Agency for International Development (USAID)
Tourism For All Project

Prepared by Chemonics International Inc.
with support from Sustainable Solutions International Consulting

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ACRONYMS & ABBREVIATIONS

ATKOMA	<i>Asosiasaun Turizmu Koleku Mahanak Ataúro</i> (Ataúro Tourism Association)
BC	baseline comparison
CBD	UN Convention on Biological Diversity
CI	Conservation international
CMS	Convention of Migratory Species
Covid-19	Corona Virus Disease 2019 (SARS-CoV-2)
CSO	Civil Society Organization
CTC	Coral Triangle Center
CTI-CFF	Coral Triangle Initiative for Coral Reefs, Fisheries and Food Security
DA	District Administration
ETP	endangered, threatened and protected
FADs	fish aggregating devices
FAO	Food and Agriculture Organization of the United Nations
FCCC	UN Framework Convention on Climate Change
FGDs	focus group discussions
GoTL	Government of Timor-Leste
GSTC	Global Sustainable Tourism Council
GTA	<i>Grupo Turizmu Ataúro</i> (Ataúro Tourism Group)
ha	hectare
HCV	High Conservation Values
IBA	Important Bird Area
ind/ha	individuals per hectare
IUCN	International Union for the Conservation of Nature
IUU	Illegal, unreported and unregulated
kg	kilogram
KJAMP	<i>Komisaun Jestaun Area Marítima Protejidu</i> (Committee for the Management of Protected Maritime Area)
LHCC	live hard coral cover
M&E	monitoring and evaluation
MAF	Ministry of Agriculture and Fisheries (<i>Ministério da Agricultura e Pescas</i>)
MCIE	(former) Ministry of Commerce, Industry and Environment
MDGs	Millennium Development Goals
MMA	marine managed area
MOS	<i>Matak, Organizadu no Saudavel</i> (Green, Organized and Healthy)
MPA	Marine Protected Area
MTA	<i>Asosiasaun Turizmu Marítima</i>
MTAC	Ministry of Tourism, Arts and Culture (<i>Ministeriu Turizmu Arte e Cultura</i>)

MTAC	(former) Ministry of Tourism, Arts and Culture
MTCI	Ministry of Tourism, Commerce and Industry
NBSAP	Timor-Leste National Biodiversity Strategy and Action Plan
NGO	non-government organization
NTZ	no take zone
OIOM	One Island One Management
PB	perception based
PAN	Protected area network
PEMSEA	Partnerships in Environmental Management of the Seas of East Asia
Permatil	<i>Permakultur Timor-Leste</i> (Permaculture Timor-Leste)
Pescas	Department of Fisheries within MAF
POW	programme of work
PSE	patrol, surveillance and enforcement
RDTL	<i>República Democrática Timor-Leste</i> (Democratic Republic of Timor-Leste)
RAEOA	Special Administrative Region of Oé-Cusse Ambeno
RPOA	Regional Plan of Action
SDGs	Sustainable Development Goals
SDP	sustainable development plan
SMP	sustainable management plan
SSIC	Sustainable Solutions International Consulting
TUFs	tourism user fees
UNCCD	UN Convention to Combat Desertification
UNTAET	United Nations Transitional Administration in East Timor
UNEP	United Nations Environment Programme
USAID	United States Agency for International Development
USD	US Dollar
WTP	willingness-to-pay
WWF	World Wide Fund for Nature
ZEESM	Special Zones of Social Market Economy
ZOUP	Zero One-Use Plastics

Note: Ministerial and associated government offices and agencies referenced in this plan are titled as per time of writing (April 2020). Some offices may have changed names since this time.

EXECUTIVE SUMMARY

Ataúro Island is Timor-Leste's largest island and has been recognized by the Government of Timor-Leste (GoTL) as a critical area for marine and terrestrial biodiversity. The island hosts a population of more than 11,000 people, distributed across five villages (*suco*), with livelihoods dominated by a reliance on natural resources and ecosystem services (for agriculture, raising livestock and fishing). In 2019, in response to an increasing number of tourists drawn to visit the island for its stunning landscape and exceptional natural beauty, an "Ataúro Island Sustainable Tourism Strategy" was produced with support from the USAID Tourism For All Project. To complement this tourism strategy, the Ministry of Agriculture and Fisheries (MAF) identified the need for a Sustainable Management Plan (SMP) for the area, to support and guide the sustainable development of the island, and the communities that depend upon its resources, over the coming five years (2021-2025).

To that end, a situational analysis was undertaken exploring the high conservation values (HCV) of Ataúro Island¹ and a range of stakeholder consultations were conducted, over the period October 2019 to July 2020, to identify the key sustainability challenges, opportunities and SMP management objectives moving forward. These consultations, involving government agencies, communities on Ataúro, development partners active on the island and associated stakeholders, identified the 'vision' for the SMP, as: *"Ataúro's biodiversity and natural environment is protected, essential ecosystems are secured for people and nature, and livelihoods are sustainable and support the preservation of social and cultural heritage."*

Key challenges on Ataúro were prioritized and divided into three categories, summarized as follows:

MARINE

- Unsustainable fishing
- Seaweed cultivation limiting fishing areas
- Limited access to fishing grounds
- Marine debris and pollution
- Impact from boats
- Loss of habitat
- Climate change
- Lack of wildlife management
- Maritime boundary security
- Unsustainable marine tourism
- Lack of enforcement
- Lack of fisheries supply chain / infrastructure
- Lack of knowledge on sustainable fishing gears
- Lack of clarity on current and proposed marine management systems

TERRESTRIAL

- Lack of land connectivity / accessibility
- Freshwater scarcity
- Lack of electricity
- Land border conflicts
- Deforestation
- Lack of waste management
- Lack of sustainable agricultural practices
- Hunting wildlife
- Climate change
- Challenges to animal husbandry

SOCIO-CULTURAL

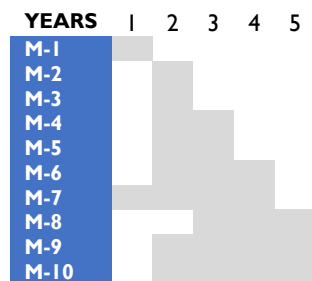
- Youth migration
- Underdeveloped basic infrastructure
- Gender inequality
- Undocumented local stories
- Outside cultural influences
- Lack of telecommunications
- Lack of health services and facilities
- Unprotected heritage sites
- Mass tourism / bad tourism
- Limited education and livelihood opportunities
- Loss of Indigenous culture (practice and knowledge)
- Lack of community engagement and coordination

¹ The HCV situational analysis explored the following topics: (1) species diversity, (2) landscape-level ecosystems and mosaics, (3) ecosystems and habitats, (4) ecosystem services, (5) community needs, and (6) cultural values.

Solutions to address these challenges were identified and associated management objectives were developed, with clear targets and timelines for implementation. The management objectives are briefly summarized as follows:

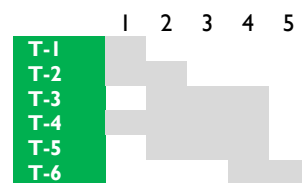
MARINE

Secure Ataúro as a Marine Protected Area (M-1), with formal recognition (M-2), a community-based collaborative management unit (M-3), a Management Plan with clear effectiveness indicators for biodiversity, fisheries, socio-economics and fisheries (M-4) that are routinely monitored (M-8), and with sustainable financing (M-5); and complemented by improved sustainable fishing infrastructure and support (M-9) and a clear regulatory support framework (M-7). Ensure communities are engaged throughout the MPA establishment and management processes, particularly regarding on-site management (M-6), with associated capacity building provided on sustainable fisheries, MPA management and patrol, surveillance and educative enforcement techniques (M-10). Establish a clear, one-stop tourism user fee to update and clarify the existing 'reef tax' and ensure optimal income generation and equitable distribution and benefit streaming to local stakeholders (M-5).



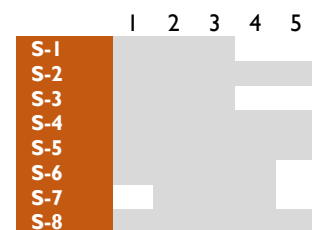
TERRESTRIAL

Develop a land zoning plan for Ataúro Island that supports conservation, sustainable management, local livelihoods, and sites of socio-cultural and historical importance, using a 'ridge-to-reef' approach (T-2) designed through a collaborative multi-stakeholder team including communities, government and development partners (T-1). Establish improved road connectivity following best-practice principles for land, soil, slope and natural habitat integrity (T-3), and advance water conservation, collection, distribution and management systems to address water scarcity (T-4). Promote and establish renewable energy systems to become a showcase site in Timor-Leste for energy best-practice (T-5). Ultimately conjoin the land and marine spatial plans to upgrade Ataúro to National Park status (T-6).



SOCIO-CULTURAL

Support current livelihoods on Ataúro to adopt best-practice approaches to sustainability and optimize existing income generation (through fishing, farming, livestock, tourism and associated enterprises) (S-1). Promote training and education to optimize alternative livelihood opportunities that reduce destructive or extractive activities (S-2) with improved information and communication technology (ICT) facilities and service providers (S-7). Ensure natural and historical heritage sites (S-3) and the indigenous culture of Ataúro Island are protected and promoted (S-4). Improve health services and facilities (S-6) and establish and enforce a zero-one-use plastics policy on the island for waste management (S-5). Ensure community engagement with equitable gender representation in all proposed activities (S-8).



These objectives have been complemented by a stakeholder analysis assessing levels of both interest and influence to implement change across societal groups; as well as a portfolio of development partners intended as a reference tool to promote the coordination of efforts and advance collaboration between partner organizations active on the island.

The SMP is intended to provide a framework for the sustainable development of Ataúro, to be implemented under the leadership of the Post Administrator and five *Chefe Suco* (lead representatives), supported by Dili Municipality and MAF, with implementation support provided by development partner collaborations and associated funders.

INTRODUCTION

Ataúro Island is the largest of Timor-Leste's islands, covering an area of approximately 140.5 km² (14,050 ha), and stretching 25 km from its most northerly to southerly points (NSD, 2011; Quintas, 2016). It is located approximately 35 km off-shore from Timor-Leste's capital, Dili, and is in close proximity to two Indonesian islands: Wetar (21.5 km southwest) and Alor (38 km east) (Quintas, 2016).

The island has a rocky terrain, with a mountainous spine and steep ridged landscape, descending to coastal vista's surrounded by broad fringing coral reef. It has been recognized by the Government of Timor-Leste (GoTL) as an important area for marine and terrestrial biodiversity (NBSAP, 2015), and is a prioritized site for strategic development (under the GoTL Strategic Development Plan [SDP] 2011-2030) (GoTL, 2011).



Figure 1: Map showing the location of Ataúro Island © SSIC

Surveys on the island have revealed extraordinary coral reef habitats and associated marine biodiversity, including the presence of endangered, threatened and protected (ETP) marine megafauna (Dethmers et al., 2012; Erdmann & Mohan, 2013; Quintas, 2016; Wong & Chou, 2004). On land, the island is host to a wide range of birdlife and reptile species (Kaiser et al., 2013; Quintas, 2016).

The island is host to a population of more than 11,000 people (DA, 2018) distributed across 19 hamlets (*aldeia*) situated in five villages (*suco*). The dominant livelihoods in the area are farming and fishing, both of which rely heavily on robust ecosystem services; particularly the provision of water for land development, healthy soils and associated systems for agriculture / permaculture, and vibrant reef and coastal habitats for fish stocks (Mills et al., 2017; Welly et al., 2017).

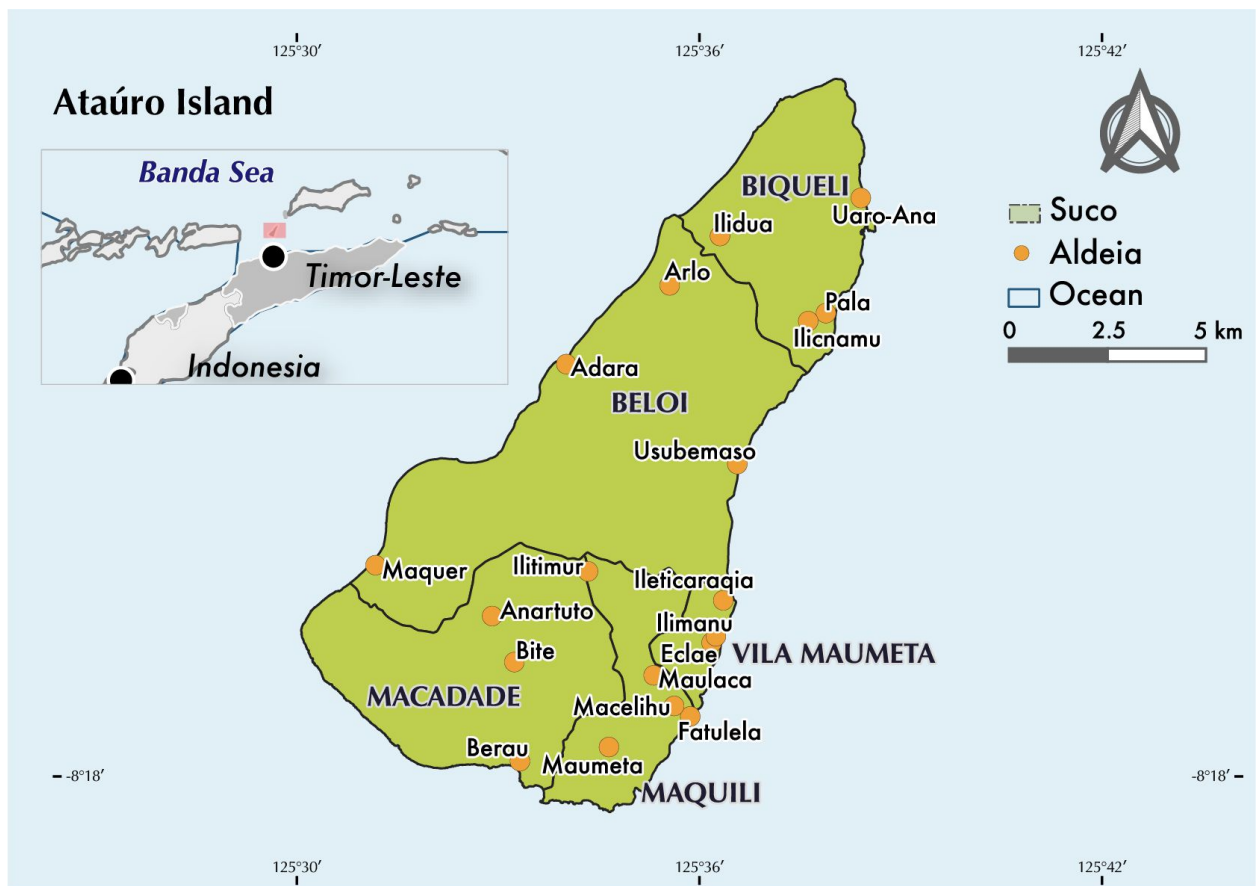


Figure 2: Map of Ataúro Island, showing the five village areas (suco) and hamlets (aldeia) © SSIC.

The stunning landscape and exceptional natural beauty of the area has made the island attractive to a growing number of tourist visitors in recent years, making tourism businesses an increasingly important livelihood in the area (Quintas, 2016; WWF, 2017). This brings with it both opportunities and challenges, particularly when combined with an increasing population on the island and the associated pressures this exerts on available natural resources.

In 2018, these concerns led to the Ministry of Agriculture and Fisheries (*Ministério da Agricultura e Pescas* - MAF) identifying Ataúro Island as a priority site for strategic support in collaboration with the USAID's Tourism For All Project. This collaboration undertook a thorough participatory assessment of the tourism potential, opportunities and challenges faced by Ataúro Island communities, and resulted in the production of an "Ataúro Island Sustainable Tourism Strategy" in 2019 (<https://www.timorleste.tl/documents/Atauro-island-sustainable-tourism-strategy-2030>).

BOX I. ABOUT THE USAID'S TOURISM FOR ALL PROJECT

The vision behind USAID's investment in the tourism sector through USAID's Tourism for All Project is to promote Timor-Leste's competitiveness as an international tourism destination while preserving its unique environmental and cultural heritage.

This work is in support of the Timor-Leste Strategic Development Plan 2011-2030 (which identifies five different tourism niches including: eco and marine, historical and cultural, adventure and sports, religious and pilgrimage, and conference and convention); and the Timor-Leste National Tourism Policy entitled Growing Tourism to 2030 – Enhancing a National Identity, which posits five 'P' targets including: Priority, Prosperity, Protection, Partnership and People.

Protected areas and sites of particular ecological, historical and cultural interest provide important geographic focus areas to establish sustainable marine tourism and sustainable management practices as exemplars for wider regions across the nation. The Tourism for All Project is working in three such areas: Ataúro Island, Mt. Ramelau Area and Cristo Rei.

In complement to this tourism strategy, MAF also identified the need for a Sustainable Management Plan (SMP) for the area, to support and guide the concurrent sustainable development of the island and the communities that depend upon its resources over the coming five years (2021-2025). This plan is intended to ensure development of the island protects critical ecological and cultural heritage; promoting the conservation and preservation of biodiversity, sustainability of ecosystem services, and advancement of sustainable livelihoods.

The implementation of this plan is also intended to contribute towards Timor-Leste's national commitment to Sustainable Development Goals (SDG's) as articulated through the national Sustainable Development Plan (GoTL, 2011; UNDP, 2017); as well as contribute to the nations' commitment to the UN Convention on Biological Diversity (CDB, NBSAP, 2015), the Convention of Migratory Species under the United Nations Environment Program (UNEP) (CMS, in development) and the Coral Triangle Initiative for Coral Reefs, Fisheries and Food Security (CTI-CFF, MAA-SSFA, 2010).

In addition to this, the plan aims to align with, and actualize national regulatory targets, particularly associated with Decree Law No. 26/2012 (Environmental Base Law), No.33/2017 (Legal Framework for Cultural Heritage), No. 5/2016 (establishing the National System of Protected Areas), as well as the Law on Biodiversity (in draft) and the Law outlining the Legal Regime for the Management and Regulation of Fisheries (draft); the latter of which will supersede the existing Law No. 5/2004 (General Fisheries Regulations) and No. 6/2004 (General Bases of the Legal Regime for the Management and Regulation of Fisheries and Aquaculture). These regulatory frameworks are

predominantly housed respectively under MAF and the former Ministries of Commerce, Industry and Environment (MCIE) and Tourism, Arts and Culture (MTAC), both of which are now operating under the revised Ministry of Tourism, Commerce and Industry (MTCI).

Ultimately however, the stakeholders for whom this SMP holds the greatest significance is the **communities and residents of Ataúro Island**; and with this in mind the plan has been developed for practicable application at the site level. While the situational analysis has been compiled as a background and reference resource that may be of interest to government agencies, development partners, donors and communities alike; the responsive management actions are intended to be practicable for on-ground purposes, and to enable the vertical alignment of solutions-based approaches between local communities and central government leadership. The plan is also intended as 'go to' resource for community and local government leaders to effectively prioritize sustainable development activities on-site, reflect upon and consider any proposed activities on the island through the lens of sustainability, identify funding and partnership needs, and work in collaboration with wider agencies and organizations to actualize sustainability initiatives.

Overall, the **aims of the SMP** are to:

- support the protection of biodiversity and the natural environment of Ataúro;
- ensure the preservation of essential ecosystem services for people (food security and livelihoods) and nature;
- support the development of sustainable livelihoods for a prosperous future; and
- support the preservation of cultural heritage.

SMP Methodology

The methodology implemented for the development of this plan was as follows (*note: the final stages of SMP development were delayed and had to be adjusted due to the Covid-19 pandemic*).

PROCESS STEPS		TIMING
1	Scoping assessment undertaken on site — meeting key stakeholders, undertaking informal interviews with community members, private sector representatives, government representatives and development partner organizations.	Oct 2019
2	Collation of background information — from governmental, academic and partner sources.	Nov 2019 – Jan 2020
3	Preparation of the Sustainable Management Plan Framework — outlining the format of the SMP (for Ataúro, but also for potential replication in wider areas of Timor-Leste).	Jan 2020
4	Production of a Situational Analysis — capturing all key background information relevant for the SMP under the framework of High Conservation Values (HCVs), producing development profiles of development partners active in Ataúro, and undertaking a preliminary stakeholder analysis.	Jan – Feb 2020
5	First Round of Stakeholder Workshops — to gather input and identify the preliminary targets and management objectives of the SMP.	Feb – Mar 2020
6	Preliminary development of outline objectives and targets — for setting context and scope (for further review and refinement).	Mar - Apr 2020
7	Compilation of full (draft) SMP document for USAID review and input.	Jun 2020
8	Sharing of the draft SMP with key targeted development partners for review and input (recognizing the draft is pre-community consultation)	Jun – Jul 2020
9	Carefully managed on-site Stakeholder Consultations through Roadshow — with four suco and associated community representatives on Ataúro, to gather input and further refine and development SMP goals.	Jul 2020 <i>(delayed from Apr 2020)</i>
10	Compiling inputs and adjustments where relevant to SMP draft and finalizing SMP document.	Aug 2020 <i>(delayed from Jun 2020)</i>

Full details of the stakeholder consultations and workshops are provided in **Appendix One**.

SITUATIONAL ANALYSIS

A: Overview Analysis of Ataúro's High Conservation Values

This high-level analysis aims to capture the current status of Ataúro Island through the lens of High Conservation Values (HCV). This includes the following values and their standardized definitions.

- HCV 1 Species diversity: Concentrations of biological diversity including endemic species, and rare, threatened or endangered species, that are significant at global, regional or national levels.
- HCV 2 Landscape-level ecosystems and mosaics: Large landscape-level ecosystems and ecosystem mosaics that are significant at global, regional or national levels, and that contain viable populations of the great majority of the naturally occurring species in natural patterns of distribution and abundance.
- HCV 3 Ecosystems and habitats: Rare, threatened, or endangered ecosystems, habitats or refugia.
- HCV 4 Ecosystem services: Basic ecosystem services in critical situations, including protection of water catchments and control of erosion of vulnerable soils and slopes.
- HCV 5 Community needs: Sites and resources fundamental for satisfying the basic necessities of local communities or indigenous peoples (for livelihoods, health, nutrition, water, etc...), identified through engagement with these communities or indigenous peoples.
- HCV 6 Cultural values: Sites, resources, habitats and landscapes of global or national cultural, archaeological or historical significance, and/or of critical cultural, ecological, economic or religious/sacred importance for the traditional cultures of local communities or indigenous peoples, identified through engagement with these local communities or indigenous peoples.

HCV 1 — SPECIES DIVERSITY

Timor-Leste is situated within the Coral Triangle, and as such is part of world's epicenter of marine biodiversity and tropical terrestrial ecology; with high levels of endemism, and high representation of endangered, threatened and protected (ETP) species (ADB, 2014; Burke et al., 2012). Ataúro Island has been relatively well surveyed for biodiversity compared to other areas in Timor-Leste, and while more work would be required to gather a full inventory of key species, the studies that have been undertaken reveal a high level of diversity in the area.

Marine Species Diversity

Studies undertaken by Conservation International (CI) in 2013 identified 190 different species of hard coral existing in the fringing reef surrounding Ataúro Island (Turak & De Vantier, 2013). This includes species of branching corals (*Acropora*), encrusting corals (*Astreopora*), foliose corals (*Montipora*), brain corals (*Merulinidae*), and boulder corals (*Porites*). These corals are important species in themselves, but also provide critical habitat for an extraordinary array of reef fish, with 294 species recorded in 2013 (Erdman et al., 2013). Of these, one species was found to be potentially new to science, a ray-finned chromis species (*Pomacentridae*) with entirely blue pelvic fins (see figure 3). Three other species were also recorded for the first time in Ataúro, showing considerable extension of their presumed range. These were a wrasse (*Cirrhilabrus tonozukai*), a dragonet (*Synchiropus tudorjonesi*) and a fairy basslet (*Pseudanthias charlenae*) (see figure 3) (Erdman et al., 2013).



Figure 3: Reef species discoveries on Ataúro (extracted from Erdman et al., 2013, © Conservation International). Clockwise from top left: a ray-finned chromis species (*Pomacentridae*), wrasse (*Cirrhilabrus tonozukai*), dragonet (*Synchiropus tudorjonesi*) and fairy basslet (*Pseudanthias charlenae*)

In addition to coral and reef fish species, the marine environment is host to a plethora of invertebrates, mollusk species and other microfauna that have been so far little studied and are lacking adequate data.

The site is also host to seagrass beds, with at least four species of seagrass so far identified (*Halophila ovalis*, *Syringodium isoetifolium*, *Thalassia hemprichii* and *Thallasodendron ciliatum*) (Cabanban, 2015).

Mangroves are also present on the island, but in generally small stand areas. Species identified to date include: *Avicennia marina*, *Bruguiera cylindrica*, *Sonneratia caseolaris*, *Sonneratia ovata*, another *Sonneratia* sp. (as yet to be identified), and *Xylocarpus granatum* (to be confirmed) (Cabanban, 2015).

In terms of megafauna, the marine environment is host to turtles and dugong, particularly observable in the seagrass beds near the main villages of Beloi, Biqueli and Maqueli. Meanwhile larger marine species can be found predominantly in the deeper waters offshore, including 13 cetacean species (whales and dolphins) (Dethmers et al., 2012). Many of these cetacean species are migratory, and are drawn into the region through the presence of two deep straits surrounding Ataúro (the Ombai Strait and Wetar Strait, see section HCV 2 for more information). Whales observed in the area include species recognized by the IUCN red list, such as the ‘endangered’ blue whale (*Balaenoptera musculus*), ‘vulnerable’ sperm whale (*Physeter macrocephalus*), Cuvier’s beaked whale (*Ziphius cavirostris*), and the ‘near-threatened’ false killer whale (*Pseudorca crassidens*). Other non-threatened whale species observed include the Sei whale (*Balaenoptera borealis*), short-finned pilot whale (*Globicephala macrorhynchus*), pygmy killer whale (*Feresa attenuata*) and melon-headed whale (*Peponocephala electra*). Dolphin species observed in the region include Risso’s dolphin (*Grampus griseus*), Fraser’s dolphin (*Lagenodelphis hosei*), spotted dolphin (*Stenella attenuata*), rough-toothed dolphin (*Steno bredanensis*), and spinner dolphin (*Stenella longirostris*).

Ataúro Island is also important for sharks and rays, with the ‘near-threatened’ grey reef shark (*Carcharhinus amblyrhynchos*) observed in its waters (Compass, 2017) as well as blacktip and whitetip reef sharks (*Carcharhinus melanopterus* and *Triaenodon obesus*).

It is important to note that many of the above species are recognized as protected in Timor-Leste under the Joint Ministerial Diploma No. 18/2017 on Protected Aquatic Species (see **Appendix Two**).

Terrestrial Species Diversity

The terrestrial habitat of Ataúro is a mix of dry grassland and eucalyptus savannah, with semi-evergreen tropical and montane forest at higher altitudes and in gullies. Outside of land areas converted for agriculture, plant life is dominated by the indigenous Eucalyptus species (including *Eucalyptus alba* and *Eucalyptus urophylla*) (BI, 2020; WWF, 2017), while the more mountainous wild areas include an array of Ficus trees, orchids and ferns (as yet largely undocumented) (Emmett, 2015).

Animal diversity on the land is best documented with regards to birds and reptiles. A total of 84 bird species have been recorded on Ataúro Island (Trainor & Soares, 2004) and the island is recognized as an Important Bird Area (IBA) (Trainor et al., 2007). These species include three ‘near-threatened’

species based in IUCN classifications: the beach thick-knee (*Esacus magnirostris*), Malaysian plover (*Charadrius peronei*) and oriental darter (*Anhinga melanogaster*) (Trainor, 2005). Additionally, Ataúro is host to species that are endemic to the islands of Timor and Wetar; the slaty cuckoo-dove (*Turacoena modesta*) and Timor green pigeon (*Treron psittacea*) alongside a total of 14 restricted-range species (Trainor et al., 2007).

Based on studies conducted in 2013, the island has been found to support ten different lizard species from three families (Gekkonidae, Scincidae and Varanidae) and four snake species, including one species of blind snake from the family Typhlopidae and one species of venomous snake, the white-lipped island pit viper (*Trimeresurus insularis*). In addition to this there have been unconfirmed sightings of spitting cobra's that appear to be in miniaturized form compared to observed sightings in nearby large land mass areas, suggesting the potential of an endemic sub-species / variant existing (as yet to be confirmed) (Kaiser et al., 2013). In addition to this some wild mammals exist on the island but there is limited documentation of them. They are known to include at least three species of bats, one shrew species and a civet species (Emmett, 2015).

HCV 2 — LANDSCAPE-LEVEL ECOSYSTEMS AND MOSAICS

Geologically, Ataúro Island is a member of the Inner Banda Arc of islands, which extends from Lombok in Indonesia through to the Banda islands (in contrast to Timor-Leste mainland which is part of the Outer Arc) (BI, 2020). The island is estimated to be between 3 – 3.5 million years old and consists of highly eroded volcanic remnants of marine origin (Trainor et al., 2008). The southern area of the island is host to three mountain ranges: Tutunair Inan, Hahi Hui and Mount Manucoco (the latter of which is the highest peak on the island, at 995m above sea level (BI, 2020; Quintas, 2016). These ranges are comprised of ridged tertiary mio-pliocene substrate, while the coastal regions are comprised of extensive uplifted coralline reef substrate (coral rag) (BI, 2020).

The marine environment surrounding Ataúro comprises a fringing reef, with wide expanses of coral gardens in the north and east of the island, accompanied by spectacular coral walls and deep plunging drop-offs, particularly on the west of the island (Silcock, 2020). The deep straits either side of the island (Ombai and Wetar) provide a throughflow of current (that can be critical for providing coral larvae recruits to an area), and likely promotes cooler upwellings from current swells. Both of these factors are recognized as essential elements for promoting “climate change resilience” for coral reefs; as the cool upwellings counter the increased sea surface temperature caused by global warming (that can otherwise cause bleaching and death of a reef); and the supply of larvae and recruits through current flows provide genetic diversity in reef stock that promotes robustness of the system (Grimsditch & Salm, 2006).

The underwater troughs of the Ombai-Wetar Strait are estimated to reach more the 3km deep, and are also recognized as a crucial area for marine mammal species, providing a major migration corridor for large whales, pelagic sharks, sea turtles and other marine megafauna in the western Indo-Pacific. The region is of such global significance that it has recently been declared as a ‘Mission Blue Hope Spot’.

“The Hope Spot [recognizes] the people of Timor-Leste’s extraordinary commitment to ocean conservation [and their] goals of establishing the country as a sustainable dive tourism and whale-watching destination, developing community-based conservation and marine ecotourism livelihoods, and supporting improved ocean protection.”

Dr. Sylvia Earle, Founder, Mission Blue, June 2020.

The importance of these waters surrounding Ataúro, combined with the resiliency of the marine environment, species diversity and ecosystem health of the island, have led to Ataúro Island being recommended for formal protection status. To date, the island is already host to three categories of protected sites (see boxes II and III).

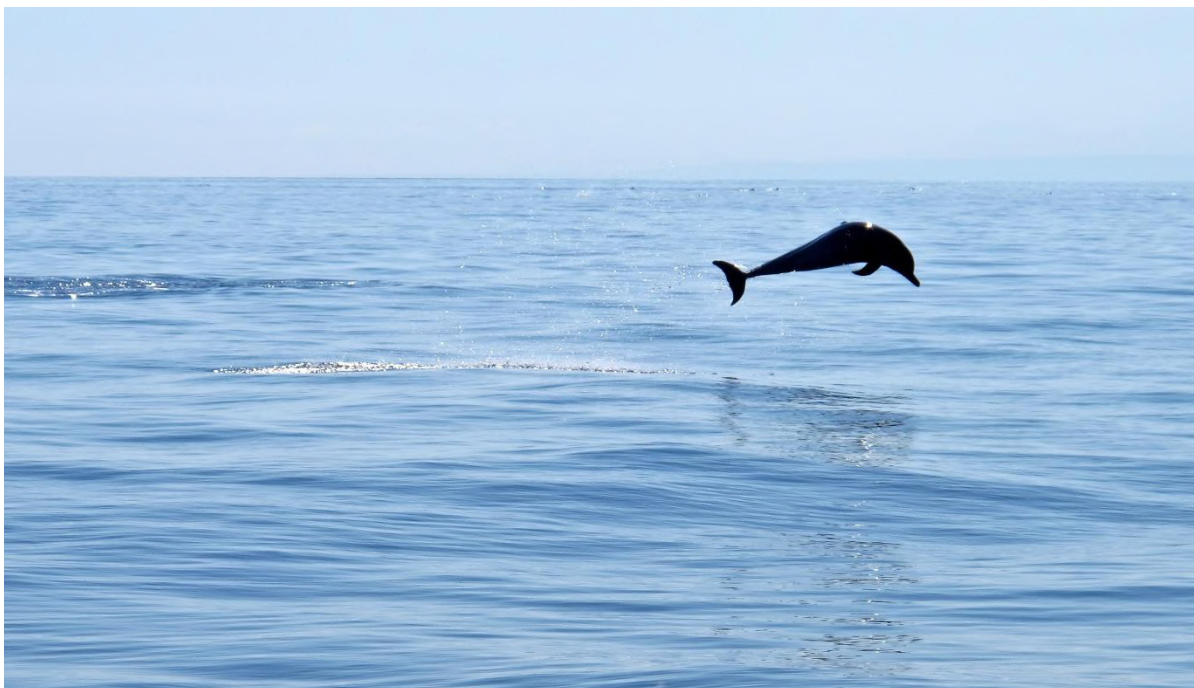


Figure 4: Dolphin leaping in the Ombai-Wetar Straits around Ataúro Island © UN Photo/Martine Perret

BOX II. EXISTING PROTECTED SITES IN ATAÚRO

(1) Manucoco Protected Area

Situated in the south of Ataúro Island, this terrestrial area was first identified as an important site for protection in 1982, initially proposed to be a 'recreation park' and later changed to a 'nature sanctuary' (*Suaka Alam*) in 1990 under the Indonesian regime at the time (through regulation no. 1062) (Trainor et al., 2017). Its' designation was further reviewed under the United Nations Transitional Administration in East Timor (UNTAET) where it was declared as a 'protected area' through regulation no. 19/2000. It is thought that interest in this site was first generated as a result of reports emerging from local communities, particularly Makadade, of the great variety of bird species that could be found (Quintas, 2016).

The site was re-delineated by MAF in 2013, and today covers an area of 2,137 ha (MAF, 2013). This is equivalent to around 15 percent of the landmass of Ataúro Island, However the Timor-Leste National Ecological Gap Assessment estimates that less than 5 percent of the protected area is effectively safeguarded, due primarily to issues of inaccessibility (Grantham et al., 2011); and to date the site has no protected area infrastructure or management systems in place, including a lack of any signage indicating the area is protected (Quintas, 2016).

(2) Vila Marine Protected Area

Upon the enactment of a new Decree Law on Protected Areas (No. 5/2016), 46 protected areas were gazetted across Timor-Leste as part of a protected area network (PAN) initiative. As a part of this process the area around Vila in Ataúro was declared an 'Aquatic Nature Reserve'. Covering an area of 50.85 ha, the site was identified based on research conducted that revealed the area to be resilient to climate change, with a healthy reef system (50.7 percent live hard and soft coral cover) and associated small mangrove stand and seagrass beds (Cabanban, 2015; Edyvane et al., 2012). The area was gazetted as 100 percent no take zone, with a surrounding buffer area.

(3) Tara Bandu – Marine Managed Areas

Through all of Timor-Leste there is a tradition known as “*Tara Bandu*”, a local custom that enables villages and communities to manage their own natural resources through local customary traditions (see box III). In Ataúro, the community of Adara hamlet (*Aldeia*) were the first to use this traditional approach in 2016 to set aside a marine area in their waters as ‘no take’ (with support provided by WorldFish). The aim of the marine managed area (MMA) is to protect the reef habitat, promote sustainable fisheries and food security through the replenishment of fish and marine product stocks, and promote marine ecotourism to the area by ensuring the preservation of the marine ecosystem. Following the success of this initiative, and with further support provided by Conservation International, a further twelve MMAs were established around the coastline of Ataúro through this *Tara Bandu* customary arrangement with the coastal communities in those areas (through 2017 and 2018).

Each of these sites includes a core area that is ‘no take’, surrounded by a buffer area. Activities permitted in these areas are governed through Suco regulations that have been developed for each site (reviewable every two years). In the no take areas, all fishing and gleaning activities are forbidden, as is anchoring; and motorboats should not have access except in the cases of: (a) pre-approved access for non-destructive / extractive tourism activities, (b) community marine monitoring, and (c) in situations related to emergencies at sea (Suco BI et al., 2017). In the buffer areas fishing is permitted using semi-traditional fishing techniques and for set times agreed with the Suco Council and community co-management committee of the site. It is possible to anchor and spearfish for larger fish, but the use of nets and large lures is forbidden (Suco BI et al., 2017). The Suco regulations[◇] are the same for each site (signed and agreed by the relevant Suco Council); and the document also includes greater detailed objectives of the MMA, information on the sanctions to be utilized for non-compliance, the management approach to be utilized for the area and associated rules (see an example of a full Suco regulation in **Appendix Three**).

Overall, the 13 MMA’s established under the *Tara Bandu* mechanism around Ataúro island cover a combined area of 1,308 ha, of which 37 percent (488 ha) are ‘no take’.

[◇] *The Suco regulations were developed in partnership with the General Directorate for Fisheries; General Directorate for Forestry, Coffee and Industrial Plants; General Directorate for Environmental and Administration Services of Ataúro and Conservation International)*

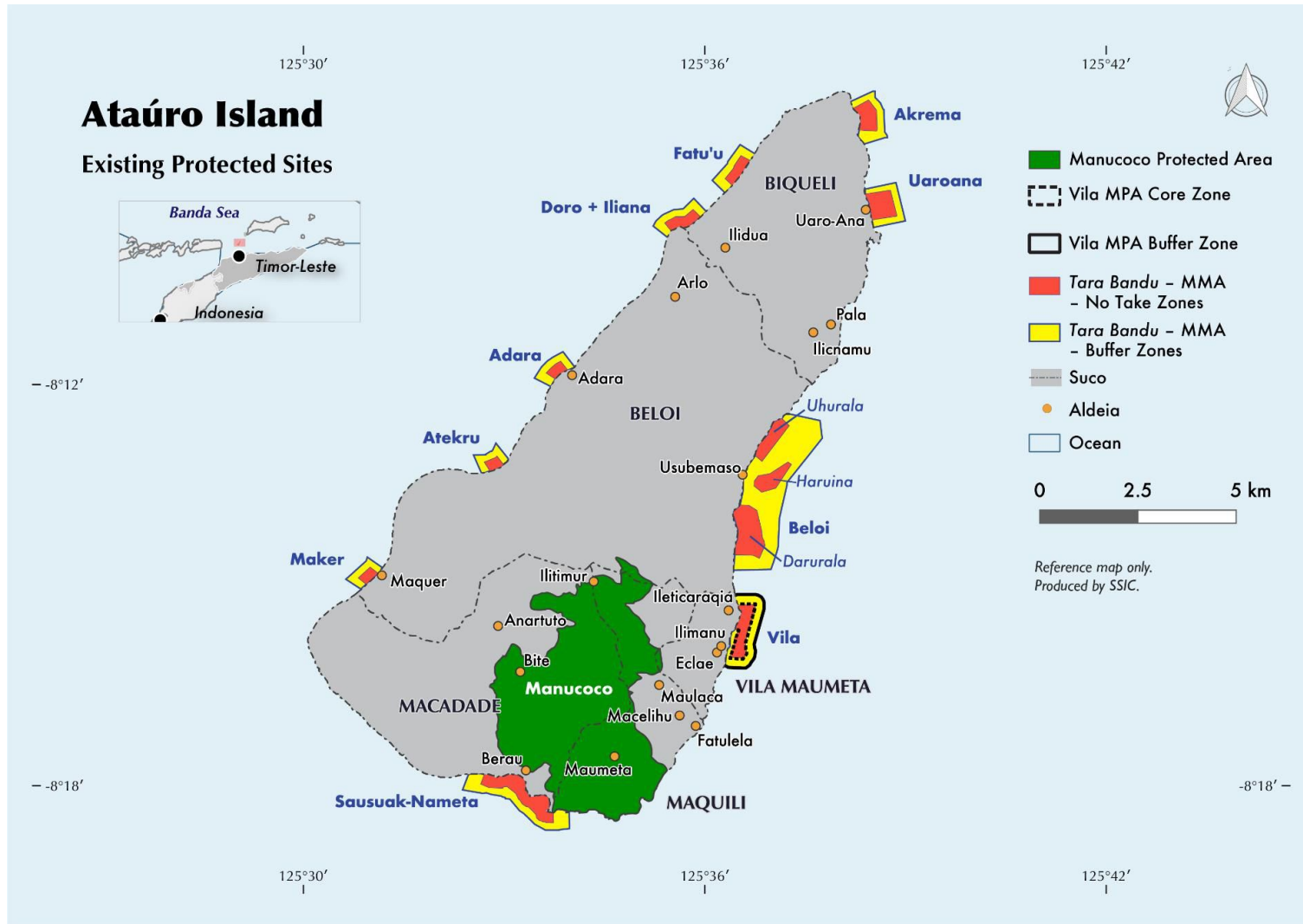


Figure 5: Existing protected sites on Ataúro Island.

BOX III. ABOUT TARA BANDU

“The State shall recognize and value the norms and customs of East Timor that are not contrary to the Constitution and to any legislation dealing specifically with customary law”

(Constitution, Article 2.4)

Tara Bandu refers to local customary laws that regulate the relationship between humans and the environment surrounding them. Under a *Tara Bandu*, restrictions and prohibitions can be applied to the use or extraction of natural resources. The motivations for a *Tara Bandu* can be varied, and may include: protecting religious, spiritual or ceremonial sites; protecting community resources from theft or damage; promoting effective land management (e.g. prohibiting the felling of trees in certain areas to maintain slope integrity and avoid landslides or flooding); promoting optimal harvesting (e.g. by restricting access for set periods of time); or promoting re-generation (e.g. in exploited habitats, or by protecting marine areas to promote re-generation of fisheries stock).

It is a well-known tradition, thought to have first been documented during the Portuguese occupation of Timor-Leste, with some reports suggesting the tradition was actively blocked under Indonesian occupation. Since gaining independence, communities across Timor-Leste have been reinstating this tradition, with the custom experiencing a resurgence of interest particularly amongst the younger generations (Mills et al., 2019; Welly et al., 2017).

As a form of customary law, *Tara bandu* is supported by formal law through Article 8, sub-sections 1,2 and 3 of the ‘Environmental Base Law, No. 26/2012’. Once a community agrees on a *Tara Bandu*, all parties are bound by it. A person found guilty of violating a *Tara Bandu* restriction may be fined and / or have to hand over assets to the community, with many believing such a violation incurs a curse upon that individual. *Tara Bandu* is commonly used to safeguard trees, coconuts, bamboo and other agricultural products. On Ataúro Island, *Tara Bandu* has been used to protect mangrove areas, nut trees and traditional bee farms, and more recently has been used to establish marine managed areas (MMAs) (Mills et al., 2019; Quintas, 2016).

HCV 3 — ECOSYSTEMS AND HABITATS

Marine Ecosystems and Habitats

Coral reefs are living communities of animals. Individual colonies of hard corals form an exoskeleton that gives reefs their hardened, colorful, rock-like appearance. Though reefs cover less than one percent of the surface area of the world's oceans, they are vital as fishery nurseries, providing critical breeding habitat for 25 percent of all marine fish. As such, coral reefs are the engines of tropical marine biodiversity (MMAF & USAID SEA, 2018).

However, reefs globally are facing a wide and intensifying array of threats, including impacts from overfishing, destructive fishing, extraction, coastal development, agricultural runoff and shipping. In addition, climate change is compounding these local threats to reefs.² These challenges, combined, have resulted in 75 percent of the world's reefs being classified as “threatened”; a figure that increases sharply in Southeast Asia, where nearly 95 percent of reefs are considered “threatened” and approximately 50 percent are in the “high or very high” threat category (Burke et al., 2011; Burke et al., 2012).

The Ataúro Island coral reef ecosystem is estimated to cover an area of 98 km² (CI, 2014) and is considered to be ‘Good/Healthy’ condition (Welly et al., 2017), with observed levels of resilience to climate change (as outlined in the previous section). As such, this is an important ecosystem to protect, as other reef systems in Timor-Leste may not experience the same levels of resilience and robustness to the myriad threats experienced in the region.

A useful measure of reef health is the level of live hard coral cover (LHCC) observable on the reef. Studies by the US National Oceanic and Atmospheric Administration (NOAA) with support from USAID (conducted in 2017) reveal an average hard coral cover of 20.5 (±2) percent hard coral cover around the island (PIFSC, 2017); while studies conducted by the Coral Triangle Center (CTC) suggest a far higher overall average LHCC of 55.8 percent, ranging between sites and between depths (with the highest LHCC observed at a 3 m depth in the Akrema area @ 61 percent, and Beloi area @ 57 percent), indicating particularly healthy coral colonies at these sites (CTC, 2019b; Welly et al., 2017).

Studies into ‘reef fish abundance’ and ‘reef fish biomass’ can also be effective proxy measures of reef ecosystem health and associated fishery system health. The 2017 NOAA study found fish biomass in Western Ataúro to be greater than comparable remote areas in Timor-Leste and the Pacific (PIFSC,

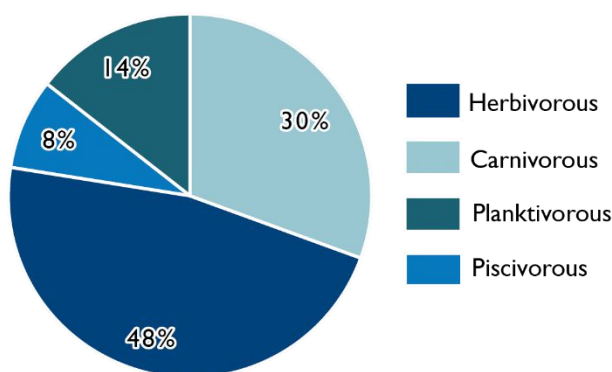
² Climate change related threats are predominantly: (a) increased sea surface temperatures causing ‘coral bleaching’ and high levels of coral mortality (a process whereby the coral loses its colorful symbiotic algae that normally live within the coral polyp and provide photosynthetic energy); (b) increasing ocean acidification (as oceans absorb CO₂ from the atmosphere) making it challenging for corals, and other calcified sea creatures, to maintain their exoskeleton structures.

2017). A study conducted by CTC in the same year revealed 72 species of key commercially important reef fish species prevalent in Ataúro's waters (under 11 families) (see **Appendix Four**) (CTC, 2017d). The abundance of these commercially important fish species was found to average 1,365 individuals per hectare of reef area (ind/ha), with surgeonfish (Acanthuridae) being the most abundant (489 ind/ha) followed by snapper (Lutjanidae) (351 ind/ha) and parrotfish (Scarini) (286 ind/ha). Overall, abundance ranged from a low of < 600 ind/ha (in Bihawa site), to highs of over 2,000 ind/ha (recorded in Atekru, Akrema and Maker) (Welly et al., 2017). Meanwhile, reef fish biomass for these commercially important species was found to average 336.8 kg/ha on Ataúro's reefs, with snapper (Lutjanidae) dominating (av. 114.7 kg/ha). Between sites however, these biomass measures varied greatly, from a high of 698 kg/ha in Illiana to a low of 51.35 kg/ha in Bihawa.

The results of these abundance and biomass measures show that the Ataúro reefs are borderline with regards to the health of the ecosystem from a fishery perspective, whereby a 'healthy state' for fish biomass is broadly interpreted as greater than 600 kg/ha, and a 'pristine state' is greater than 1,000 kg/ha (McClanahan et al., 2011; Fujita & Karr, 2012); however, as the study only examined measures related to primary commercially important species, a broader assessment on full reef fish representation would be required to fully interpret ecosystem health based on these results.

That the ecosystem may be under stress however is supported by the fact that most reef fish observed (93 percent) are considered small (< 30cm), indicating some level of pressure on the nearshore fishery as larger fish are removed (Welly et al., 2017). In addition to this, reef fish trophic levels are dominated by herbivorous species (48 percent), that may be indicative of algal growth due to associated reef stress (Welly et al., 2017) (see figure 6).

Trophic levels of Reef Fish on Ataúro



Range of Average Reef Fish Lengths in Ataúro

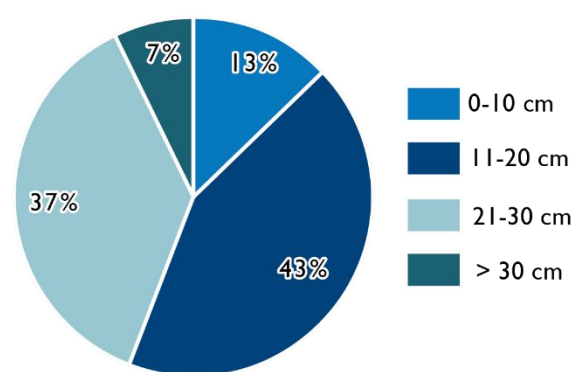


Figure 6: Range of average fish lengths and trophic levels in Ataúro's reef fishery.

Terrestrial Ecosystems and Habitats

Information is limited with regards to the terrestrial habitat of Ataúro and the status for rare or important terrestrial refugia. The land has a combination of natural and productive landscapes, with key wild habitat types including dry grassland and eucalyptus savannah, with semi-evergreen tropical forest at higher altitudes and in gullies (WWF, 2017). The eucalyptus habitat present is both wild and cultivated, with the trees providing an important source of timber for construction as well as making satisfactory fuel wood (Blake, 2020). (see HCV 5, Community Needs, for more information about the productive landscape). Informal reports of orchid species and protected caves that may harbor rare or endangered habitat types exist, but have yet to be verified (Emmett, 2015).

The island is also host to micro-ecosystems in the form of saltwater hot springs (in Biqueli and Maqueli) as well as freshwater springs and waterfalls located around Makadade, Maqueli, and Vila Maumeta. Cave habitats also exist in Biqueli and Beloi (Quintas, 2016).

HCV 4 — ECOSYSTEM SERVICES

Ecosystem services can generally be broken down into four key category types (as shown in table 1).

SUPPORT SERVICES	PROVISIONING SERVICES
<ul style="list-style-type: none">• nutrient cycling• soil formation• habitat provision• primary production• pollination	<ul style="list-style-type: none">• clean water• food (plant and animal)• raw materials (for production)• medicinal resources• genetic resources (for adapting and enhancing systems)• chemical resources• energy resources (hydro, wind, biomass)• ornamental resources
CULTURAL SERVICES	REGULATING SERVICES
<ul style="list-style-type: none">• spiritual and religious• recreational• educational• therapeutic	<ul style="list-style-type: none">• carbon sequestration and climate regulation• land, soil and topographical integrity• waste decomposition and detoxification• purification of water and air• pest and disease control• predation regulation of prey populations

Table 1: Ecosystem services, defined under four key categories (adapted from MEA, 2005).

While studies are limited with regards to ecosystem services specific to Ataúro Island, it is clear that as an island supporting an 11,000 strong population that is heavily reliant on working directly with the natural resources available, many, if not most, of the above ecosystem services are relevant for the area.

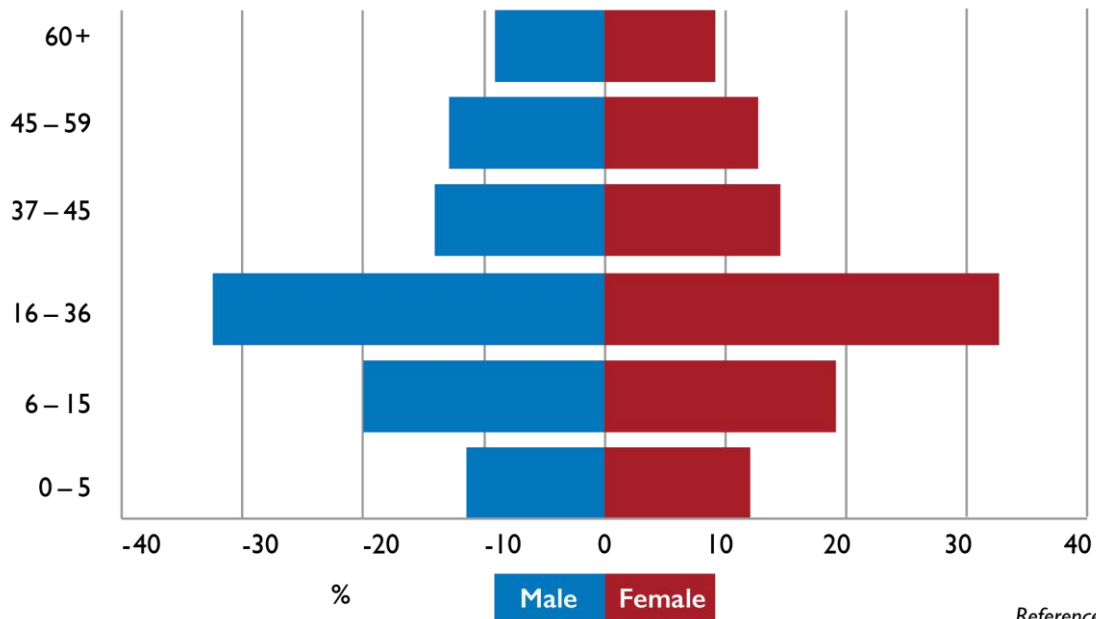
Ecosystem services that are particularly important and / or at risk from localized threats include:

- Land, soil and topographical integrity (regulatory service) — soil quality in Ataúro is low, and topographical integrity is challenging, given the steep ridged landscape. The island is particularly susceptible to landslides around the Manucoco region and ridges backing the capital of Vila Maumeta (IPG, 2019). Awareness is generally high regarding the importance of avoiding felling of trees in key areas in order to avoid ridge collapses (Emmett, 2015).
- Clean water (provisioning service) — potable water is very limited in some areas of Ataúro. The island has no major river courses and limited freshwater springs. Coastal wells are becoming increasingly saline through saltwater intrusion. Rainwater catchment and storage systems are being advanced across the island, but further work is required to ensure adequate water supplies are available to the growing population; particularly if the island is to host increasing numbers of tourist visitors who will further draw upon the limited water provisions available. These challenges are particularly acute in Beloi, Vila Maumeta, Biqueli and Makadade (Quintas, 2016).
- Food (plant and animal) (provisioning service) — the poor quality of soil is a challenge for crop productivity, though increasing support for permaculture farming and small-scale home gardening systems is enabling the people of island to utilize the available resources more optimally and sustainably. Animal provision is largely wild-caught fish and marine species, highlighting the importance of sustainable marine and coastal management to ensure future productivity of this provisioning service. On land, animal supplies generally come from domesticated livestock, depending on feeding and grazing off the land (Mills et al., 2019; Oliveira et al., 2019).
- Recreational (cultural service) — As tourism becomes an increasingly important part of the Ataúrian economy, the preservation of the islands culture, heritage and recreational uses of nature is of paramount importance to the future sustainability of the island.

HCV 5 — COMMUNITY NEEDS

Identifying the sites and resources that are fundamental for satisfying the needs of local communities is essential for sustainable planning, including needs to livelihoods, health and human well-being.

Based on Post Administrator data collected in 2018, the population of Ataúro Island at that time was 11,224 people (DA, 2018). Demographically the population is heavily weighted to a young, working age population (16-36 years) and emerging youth (0-15 years).



Reference: DA, 2018.

Figure 7: Demographic chart of the population of Ataúro Island (2018).
Note: Age range distributions are as document in Post Administrators office.

Studies conducted by WorldFish (Mills et al., 2017) reveal a complex livelihoods landscape heavily dependent on the natural resources of the area. Based on surveys conducted³ in 2016, it was found that nearly all households (99.6 percent) engage in more than one livelihood activity, with 67 percent of households identifying their primary livelihoods as being linked to primary production (i.e. directly connected to natural resource utilization). Almost all households raise some form of livestock that graze/feed on the land (93 percent) and farm some form of crops (89 percent). However, less than a quarter of crop farming households (23 percent) consider this to be their main livelihood (Mills et al., 2017).

Overall, 41 percent of households are involved in fishing, more than half of which (54 percent) identify this as their primary livelihood. This indicates that Ataúro Island is relatively fishery dependent compared to mainland Timor-Leste. This is further borne out when examining per capita

³ These surveys interviewed 495 households across 15 communities.

fishing consumption, where the national average for Timor-Leste is 6.1 kg fish per person per year, while coastal communities such as those found on Ataúro average nearly three times this amount (17.6 kg fish per person) (Mills et al., 2017).

Other livelihoods include formal employment and small-scale businesses, with 13.5 percent of households identifying formal government employment as their most important source of income. In terms of gender, crop farming was found to be a predominantly women's occupation, while formal government employment is generally dominated by men (Mills et al., 2017). Dichotomies between gender roles are generally not as severe as other areas of Timor-Leste however; for example, while men generally earn more from fishing, women are also highly engaged in marine resource use, actively gleaning (for octopus, crabs and shellfish), gill-netting and spearfishing, as highlighted in the award-winning 2013 documentary '*Wawata Topu – Mermaids of Timor-Leste*' (Palazon & Alonso, 2013).

The WorldFish study also revealed that the average household income in Ataúro Island is \$272 USD (± 16.3) per month. This ranges greatly between regions however, with upland communities earning substantially lower median incomes compared to coastal communities (\$30 USD to \$82.5 USD respectively) (Mills et al., 2017). Amongst natural resource-based livelihoods, fishing and livestock rearing were revealed to be relatively stable livelihoods compared to crop production that has historically suffered shock losses from pest attacks and storage challenges (Mills et al., 2017). Overall, fishing was identified as the highest income earner, closely followed by livestock rearing, while crop farming yields significantly lower incomes⁴ (Mills et al., 2017).

Fishing

The number of fishers on Ataúro Island is estimated to be around 1,500, which represents around 30 percent of Timor-Leste's fishing fleet as a whole (estimated to be around 5,000) (Mills et al., 2019; Wever, 2008). The fleet is comprised of 1-2 person wooden outrigger paddle canoes, larger wooden boats with outboard engines, and mechanized fiberglass boats (see figure 7) (Welly et al., 2017). Within this fleet, Maqueli is known for its fishing tradition and the use of longer-than-average canoes, while Biqueli has the largest fleet, not only for fishing, but also transporting cargo and people to and from the island (Alonso et al., 2013).

⁴ Average incomes are: fishing (\$133 \pm 13) livestock (\$103 \pm 12) and crop farming (\$53 \pm 14 USD/ month).

Fishing Fleet of Ataúro

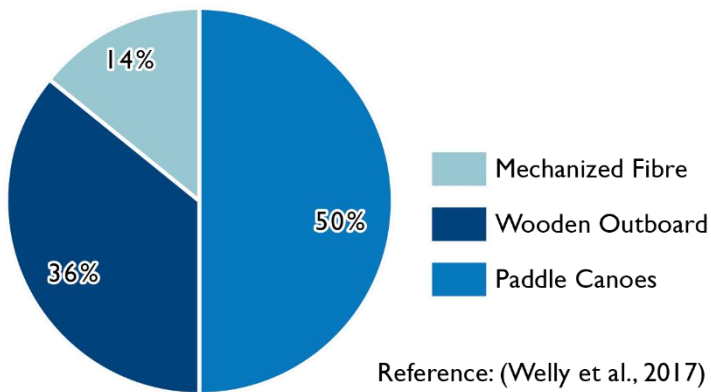


Figure 8: The distribution of fishing vessels in the Ataúro fishing fleet.

In terms of target fish species, studies on catch landings across three sites in Ataúro have revealed that the greatest yields in terms of proportional weight are for Carangidae species (particularly scad - 44 percent) followed by Caesionidae and Pterocaesio (fusiliers, known locally as *Bainar* - 13 percent) (Angarita et al., 2019; Mills et al., 2019). The rest of the catch is comprised of a mix of small

pelagics, larger pelagics (such as tuna) and reef fish (of which there are 72 commercially important species on Ataúro) (Mills et al., 2019; Welly et al., 2017).

The dominant fishing gears used are small tangle and gill-nets (37 percent), spears (35 percent) and handlines (28 percent) (Welly et al., 2017). Handlines are single or multi-hook, generally using 1/0 or 2/0 sized hooks alongside homemade chicken feather lures or nylon fibers (Mills et al., 2019)

In recent years, fish aggregating devices (FADs) have also been increasingly deployed. Traditionally made from Bamboo and often lost at sea, support provided by partners WorldFish and others has resulted in refined FAD designs that have effectively increased catches at sites by up to 2.5-fold (Mills et al., 2019). The key species caught using FADs are the mackerel scad (*Decapterus macarellus*), short-bodied mackerel (*Rastrelliger brachysoma*) and striped fusilier (*Pterocaesio tile*). In recent studies these three species accounted for 98 percent of FAD-based catch in Adara (Tilley et al., 2019b).

Aquaculture on Ataúro is generally limited to seaweed farming. Initiated in the early 2000's this livelihood brings in relatively significant revenues for key stakeholders engaged in this activity (estimated at between \$360 and \$420 USD / month / owner household in 2012) (Angarita et al., 2019). The market is generally export focused (predominantly to China and Indonesia), though overall production volume is relatively small, and processing conditions (drying techniques) could be improved (ADB, 2014; Angarita et al., 2019).

Livestock and Farming

The key livestock animals supporting food security and livelihoods on Ataúro are chickens, goats and pigs, with some farmers also having livestock of cows (though such cattle are generally a luxury and owning a herd of cattle is a sign of wealth in the region) (Locke, 2016; Mills et al., 2019). Much of the livestock raised is for subsistence use, or shared use amongst families/communities, with some products being sold locally.

The principal crops grown on Ataúro Island are corn (maize), sweet potato, cassava, beans and coconuts; though recent advances in permaculture techniques supported by groups such as Permatil, naTerra and MercyCorps have resulted in diversification into wider legumes, peanuts, coconut, bananas, papaya and other fruit trees (BI, 2020; Mills et al., 2013). Support has also been provided in terms of improved management practices (e.g. the development of natural fertilizers and non-chemical pesticides, swale systems for forest-based agriculture and keyhole gardening) (Mckenzie, 2014); as well as improved grain storage systems, water storage systems, climate and nutrition-smart agricultural techniques and post-harvest grain management approaches (Oliveira et al., 2019).

Tourism

While still relatively new to Ataúro Island, tourism related enterprises are becoming increasingly important livelihoods. In one study conducted in 2015, between 94 and 98 percent of Ataúrians surveyed stated that community-based ecotourism was important for their local economy (Quintas, 2016). However, beneficiaries of tourism activities are not equitably distributed across Ataúro, with the majority of tourists staying in the areas of Beloi and Vila Maumeta. Tourism enterprises generally fall under eight categories: (1) guest accommodation (lodges and homestays), (2) local transport, (3) production and sale of handicrafts, (4) kiosks, (5) food and beverage providers, (6) production of traditional textiles, (7) traditional massage, and (8) traditional singing groups (Quintas, 2016).

In recent years, attention to the development of nature-based, pro-poor, community-based ecotourism development for Ataúro has been increasing, with aims to further generate livelihood opportunities into the future.

Overall data on the current number of visitors to Ataúro and the potential for visitor growth is as yet unavailable. However, for Timor-Leste as a whole, visitor arrivals per year averaged ~163,000 between 2011 and 2019 (TE, 2020). A study conducted by the Ministry of Tourism, Arts and Culture (MTAC) and the Asia Foundation in 2014 suggests however that the vast majority of these visitors are coming to Timor-Leste for business purposes, conference attendance, or visiting family and friends, with only 17 percent recorded as arriving for purely holiday purposes (Rajalingam, 2014). In 2014 alone, estimates suggest that 55,000 tourist arrivals were recorded, generating around \$14 million USD for the economy, and directly employing around 4,300 people nationally (MTAC, 2017).

In terms of how many of these arrivals ended up visiting Ataúro, the 2014 study suggests that of the 'holiday visitors' only (when excluding sole Dili travelers from the analysis) around 23 percent were recorded as visiting Ataúro (Rajalingam, 2014).

Nonetheless, tourism arrivals are anticipated to increase in Timor-Leste as a whole, as the government has set a target of achieving 200,000 international visits per year by 2030, aiming to contribute \$150 million USD annually to the economy and employ around 15,000 Timorese (MTAC, 2017).

In preparation to capitalize on this emerging economic sector, in 2016 the existing Ataúro tourism association (*Grupo Turizmu Ataúro - GTA*) was re-galvanized into the *Asosiasaun Turizmu Koleku Mahanak Ataúro (ATKOMA)* through support from various partners, including local NGO Roman Luan and the USAID's Tourism For All Project; as such this group aims to provide a foundation through which to promote tourism to improve the local economy of Ataúro.

In the same year, the arrival of Blue Ventures NGO began to bring a consistent stream of voluntourists to the region, and through their work, alongside wider partners, support was provided for the establishment of a homestay association in Beloi (now formally registered as the Ataúro Homestay Association, and involving eight host families). Also in 2016, Ataúro Island was recognized as one of the "Global 100 Green Destinations" for responsible and sustainable tourism initiatives; and in 2017 the first 'destination marketing' plan was produced with support from WWF International.

In 2019, the Ataúro Post Administration and the USAID's Tourism For All Project, in collaboration with MTCL, released the "Ataúro Island Sustainable Tourism Strategy", developed in collaboration with communities and private sector stakeholders on the island. This strategy outlines the key challenges Ataúro is facing in developing sustainable tourism opportunities, and sets clear objectives and targets for the coming years to address these challenges, with the following vision:

"In the year 2030, Ataúro Island will be a pristine protected area and world-famous ecotourism destination with low impact development, renewable energy, healthy reefs, and vibrant communities that welcome a limited number of respectful visitors who will enjoy excellent service and authentic cultural and natural experiences provided by the people of Ataúro." (USAID's Tourism For All Project, 2019, p.6)

HCV 6 — CULTURAL VALUES

The people of Ataúro Island are descendants from three main clans — Humungili, Adade and Manroni. Each of these clans is bestowed with their own cultural traditions, and each has an associated linguistic dialect that continues to be used in everyday conversations, songs and rituals. In public administration and schools however, Tetum is the dominant language (Mills et al., 2017; Quintas, 2016).

Approximately 65 percent of Ataúrians are Protestant and 35 percent Catholic (unlike mainland Timor-Leste, which is 97 percent Catholic). This contrast in religious leaning between the mainland and Ataúro is due the arrival of a Calvinist Evangelist from the Netherlands visiting the island in 1933 (arriving from Alor) and sowing the seeds of gospel on the island. This Calvinist church was later converted to the Evangelical Church of God Assembly in the 1960's.

There are a range of traditional crafts produced on Ataúro, many of which are of increasing interest as purchasable items for tourist visitors. These include:

- Wood carvings by the people of Maquile — including traditional male and female figurines and dance masks to honor clan ancestors; as well as carvings of mermaids and eels, symbolic of *Tasi Feto*, the embodiment of the sea of women, and in recognition of islands fishing culture and dependence on the marine environment.
- Ataúro dolls, textiles, bags and associated merchandize — produced through the Boneca De Ataúro craft center, and empowering Ataúrian women through a cooperative institution. This center can generate up to \$1,000/day in sales in high season, supporting approximately 40 craftswomen engaged in the work.
- Cooking pots —originally made in Arlo (Beloi) this traditional handicraft became almost extinct on the island, with only two elderly women remembering how to produce these pots. NGO EmprezaDíak has since helped re-galvanize this tradition, with younger generations being taught the craft.

Ataúro is also host to a range of culturally and historically significant sites, including:

- The Monument of Exile (*Monumento Desterrado*) — built in 2002 in commemoration of the detainees captured and exiled on Ataúro Island during the Indonesian occupation in the 1980s. It is estimated that around 6,400 detainees were sent to the island between 1980 and 1982 alone, comprised of men, women, children and elderly people (Fernandes pers comm. 2020).
- Old prison (*Cadeia Antiga*) — first built in the 16th century by the Portuguese, this dungeon had an underground area to ensure people could not escape. At that time, the island of Ataúro was synonymous with incarceration, and prisoners from Portuguese colonies in

Africa (Cape Verde, Angola and Mozambique) were deported to the site, as well as local Timorese rebels (under Portuguese occupation). According to local lore, around 100 people were imprisoned in the small underground space at any time. The prison remained operational for nearly 400 years, finally being closed in 1966 following protests from the Catholic church.

- Canteen and Warehouse of Mario Lopes — who was born in Cape Verde (off the west coast of Africa) during Portuguese occupation. His opposition to Portuguese rule resulted in him being deported to Timor-Leste and imprisoned in the underground dungeon on Ataúro Island. Gaining his freedom in 1949, instead of making his escape, he built a canteen and warehouse on the island, purchased a ship, and worked to fill the warehouse with stored goods purchased from neighboring regions, to meet the needs of the local people.
- Old mission school — the first school on the island, established in 1948 by Father Ezequiel Mendes Pascoal of the Catholic church. The establishment of this school brought the first teacher, Mestre Evaristo, to the island. Graduates of this school went on to become teachers and civil servants in the public administration of Ataúro.
- The Monument of Bread and Fish (*Monumentu Paun no Ikan*) — commemorating the site of the first Catholic baptisms on the island, that took place in 1951 for the first 21 students enrolled in the above Mission School. The monument was built in the 1980's and takes the name Bread and Fish for biblical symbology.

In addition to this, there are several caves and natural sites that have cultural and spiritual significance for the people of Ataúro, including stone cave cemeteries, the Cave of Our Lady Mary, several natural water springs and waterfalls.

B: Introductory Overview of Governance at the Site

With regards to the sustainable management of Ataúro Island, it is important to recognize the administrative framework for governance at the site, and examine the key regulatory frameworks that can provide an enabling environment for effectively implementing this Sustainable Management Plan.

Administrative Framework

Ataúro Island is in the Municipality of Dili, and is governed through the Ataúro Post Administrative (local Government). The Post Administrative has an Administrator who is appointed through central government (Ministry of State Administration). The island is divided into five village areas (*suco*) each with a lead representative (*Chefe Suco*) who is elected by the village.

Several central government departments have representation on the island (Box IV), with civil servants living and working alongside the local government structure.

BOX IV. GOVERNMENT AGENCIES ON ATAÚRO

- Agriculture and Fisheries
- Maritime Police
- Custom Services
- FALINTIL- Força Defesa de Timor-Leste (F-FDTL)
- Public Works
- Electricity
- Water and Sanitation
- Health
- Education

The Ataúro Post Administrative local Government has several existing development related plans for the island, the aims of which will be important to align under this Sustainable Management Plan, including:

- The 2014 Profile Plan — This locally developed plan focuses on the key areas of tourism, infrastructure, water and sanitation, electricity, education, health, agriculture and fisheries, and telecommunication (AS-dAO, 2014).
- The Spatial Plan for Ataúro for Social Market Economy — This plan was developed in relation to the Special Economic Zones for Social Market Economy in Timor-Leste, and sets out a strategy for economic and social sustainable development, and the conservation and enhancement of the cultural, natural and ecological heritage of Ataúro. It covers a wide breadth of considerations, with proposals focused primarily on structural development, particularly roads and transportation systems, and infrastructural systems (water, electricity etc.) (ZEESM TL, 2015a).
- The Ataúro Island Sustainable Tourism Strategy — outlining the key challenges Ataúro is facing in developing sustainable tourism opportunities, and setting clear objectives and targets to capitalize on this emerging economy optimally and sustainably to 2030 (USAID, 2019)

It is important to note however that with regards to the implementation of any plans at the local level, the budgets that relate to wider sectoral agencies are not managed locally. The Post Administration and associated local representative offices of central government agencies can submit proposed plans and budgets to the relevant central government offices; but it is the responsibility of the relevant central government sector (e.g. agriculture and fisheries) to develop the overall budget and then allocate funds to Post Administrative offices (Quintas, 2016).

Most of the government infrastructure and offices are based in the Ataúro capital of Vila Maumeta.

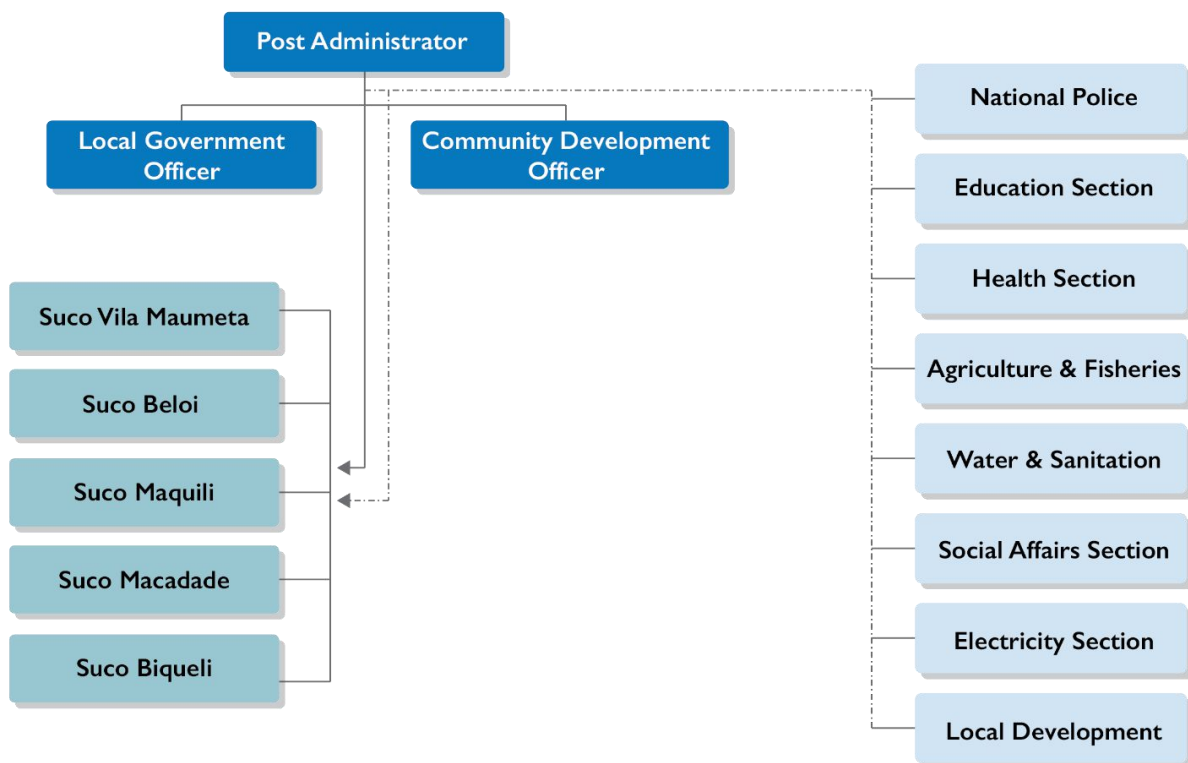


Figure 9: Administrative framework on Ataúro Island (extracted and adapted from Quintas, 2016).

There are also a range of existing development partners (international, national and local) active on Ataúro Island, focusing on wide-ranging issues, including: marine conservation, terrestrial conservation, water collection and management systems, crop farming advancements through permaculture and sustainable practices, community tourism enterprises, sustainable livelihoods, education, health and sanitation.



Figure 10: Logos of some of the key development partners currently active on Ataúro Island.

BOX V. DEVELOPMENT PARTNERS ON ATAÚRO ISLAND

Ataúro Island is fortunate to have garnered interest from a wide range of development partners. For any development activities to be implemented effectively on Ataúro Island – including the implementation of this SMP – such development partners are essential for providing technical and financial support.

However, with so many partners active on the island there is a risk of overlap, duplication or replication of work in some sectors. Additionally, as all development-related activities involve consultation with, and engagement of communities, having this diverse and strong presence of many development actors present on the island risks some level of stakeholder fatigue and confusion, particular where institutional agendas and activities are similar or overlapping.

Therefore, as a part of the work to develop this SMP, a “Portfolio of Development Partners” was developed (and translated into Tetun) as a separate resource document for all parties, including the Post Administrator and Chefe Suco, to better understand the scopes of work of each partner, and to facilitate and encourage improved collaboration between partners.

The full portfolio is available in **Appendix Five**,

Key Regulatory Frameworks

With regards to natural resource management, the regulatory framework of Timor-Leste is generally conducive to advancing sustainable development where utilized appropriately.

The Strategic Development Plan (SDP) for Timor-Leste (2011–2030) provides an integrated package of goals around three key areas: social capital, infrastructure development and economic development. The 149 sub-goals in the plan provide an important reference point for development activities (for government and wider actors, including development partners, religious organizations and civil society organizations). At the time it was produced, the SDP aligned with the ‘Millennium Development Goals’ (MDGs)⁵ (2000-2015). In September 2015, Timor-Leste went on to adopt the 2030 UN Agenda and associated ‘Sustainable Development Goals’ (SDGs)⁶ through Government Resolution No. 34 / 2015, which was subsequently ratified by a resolution of the National Parliament in November 2015 (No. 19/2015), which outlines the mechanisms for aligning government planning and budgeting systems to achieve SDGs⁷.

Following this, the SDGs Working Group assessed the alignment of Timor-Leste’s existing SDP with the new SDGs, and found strong consistencies, reaching consensus that the existing SDP adequately reflects and captures SDG targets; including those related to natural resource management, #11 (sustainable cities and communities), #13 (climate action), #14 (life below water) and #15 (life on land) etc. (UNDP, 2017).

Therefore, there is a clear mandate for political will and proactive support for implementing plans that will help the nation achieve these goals.

⁵ The MDGs were commitments agreed by all 191 UN member states in 2000 with regards to eight key areas: to eradicate extreme poverty and hunger; to achieve universal primary education; to promote gender equality and empower women; to reduce child mortality; to improve maternal health; to combat HIV/AIDS, malaria, and other diseases; to ensure environmental sustainability; and to develop a global partnership for development.

⁶ The 2030 Agenda for Sustainable Development, adopted by all United Nations Member States in 2015, provides a shared blueprint for 17 Sustainable Development Goals (SDGs), which are an urgent call for action by all countries - developed and developing - in a global partnership. They recognize that ending poverty and other deprivations must go hand-in-hand with strategies that improve health and education, reduce inequality, and spur economic growth – all while tackling climate change and working to preserve our oceans and forests.

⁷ This was further supported by Directive No. 038/2015/XII/PM of 22 December 2015 (establishing an SDG Working Group), and Government Decree No. 1/2016 (mandating that the SDGs should be reflected in all annual plans and budgets).



Figure 11: The 17 Sustainable Development Goals (SDGs) (extracted from UNDP, 2017).

Support for sustainable biodiversity conservation and natural resource management is further outlined in the Timor-Leste National Biodiversity Strategy and Action Plan (NBSAP) (updated in 2015) which outlines five priority strategies for the nation (NBSAP, 2015):

- Priority Strategy 1 — Mainstreaming biodiversity into sectoral plans and programmes to address the underlying causes of biodiversity loss.
- Priority Strategy 2 — Protecting biodiversity and promoting sustainable use.
- Priority Strategy 3 — Building climate-resilient ecosystems through effectively managing protected areas and reducing threats to biodiversity.
- Priority Strategy 4 — Enhancing ecosystems functioning and providing benefits for all.
- Priority Strategy 5 — Enhancing implementation of the NBSAP through participatory planning, knowledge management and capacity building, including at the district and sub-district (Post Administrative) and community levels.

These strategic approaches are further strengthened in the associated Biodiversity Law (draft), where the intrinsic value of biodiversity is recognized, as well as the importance of an ecosystem-based approach to management (Article 5); and clear roles and responsibilities for protecting and sustainably managing biodiversity are outlined for government entities (Articles 9-13) and local communities (Article 14). Community engagement in natural resource management is further supported through the Environmental Base Law (No. 26/2012) that contains provisions for co-management whereby local communities have both rights (Article 6) and duties (Article 7) over natural resource management.

In the case of establishing protected areas, Decree Law No. 5/2016 (National Protected Areas System) specifically recognizes the importance of “community authorities and existing customs, namely *lisuk*, *fatin lulik*, *Lisan* and *Tara Bandu*” (p.9003).⁸ Further, it states that protected areas may include community (classified) sites (Article 11.2), and has provisions for Joint Management Agreements (Article 28) and joint patrols and management (Article 39.2, sub-section g). Though it is important to note that regulations for biodiversity and conservation management are not limited by the area’s protected status, and the biodiversity law in particular emphasizes the importance of sustainable natural resource management outside of area’s with protected status.

For marine management the Joint Ministerial Diploma No. 18/MAP/MCIA/II/2017 on Protected Aquatic Species specifically prohibits the capture or extraction of protected species (Article 3) (see **Appendix Two**), as well as the capture of wider species during spawning times (Article 4). In addition to this, Law No. 6 / 2004 (Fisheries and Aquaculture) makes it a requirement that local communities and associated public and private sector stakeholders in an area are consulted in the development of any fishery management plan (Article 6, section 3, sub-sections a & d).

The recently drafted Law outlining the Legal Regime for the Management and Regulation of Fisheries (which is anticipated to supersede the existing Law No. 5/2004 and No. 6/2004 on fisheries), further emphasizes the importance of sustainable marine management. This includes protection of marine resources and aquatic species (Articles 53 and 58), sustainable management measures (Articles 70 to 74) and prohibition of destructive or damaging practices (Articles 77 to 89).

⁸ *Lisuk* is a standard of customary law that regulates the model of mutual cooperation in exploratory work related to land, livestock and construction by members of a particular community. *Fatin lulik* is a properly identified sacred site, recognized and respected by local communities. *Lisan* is a set of unwritten rules that apply in a given family grouping, dictating behaviors and attributing rights and obligations to members of the same community belonging to the same family tree.

KEY REGIONAL & INTERNATIONAL COMMITMENTS OF TIMOR-LESTE	
Signatory to:	National response outlined in:
Coral Triangle Initiative for Coral Reefs, Fisheries and Food Security (CTI-CFF)	The Timor-Leste CTI-CFF National Plan of Action
PEMSEA (Partnerships in Environmental Management of the Seas of East Asia)	Timor-Leste National Ocean Policy and Planning
Regional Plan of Action (RPOA) to Promote Responsible Fishing Practices including Combating Illegal, Unreported and Unregulated (IUU) Fishing	Regional Plan of Action (RPOA) to Promote Responsible Fishing Practices including Combating IUU Fishing
UN Convention on Biological Diversity (CBD)	National Biodiversity Strategy and Action Plan (NBSAP) 2011-2020
UN Convention on Biological Diversity (CBD)	Programme of Work (POW) on Protected Areas
UN Framework Convention on Climate Change (FCCC)	First and Second National Communication to UNFCCC
UN Sustainable Development Goals (SDGs)	Timor-Leste Strategic Development Plan (SDP) (2011-2030)
UNEP Convention of Migratory Species (CMS)	Government signs Memorandum of Understanding for the conservation and management of dugongs
UN Convention to Combat Desertification (UNCCD)	Timor-Leste National Action Program to Combat Land Degradation

Table 2: Key regional and international commitments of Timor-Leste

KEY LEGAL & REGULATORY FRAMEWORKS AT THE NATIONAL LEVEL	
Legislation:	Status:
Constitution of RDTL, Article 6, 61 and 139	Approved
Decree Law No 5/2016 establishing the National System of Protected Areas	Approved (16 March 2016)
Decree Law No. 21/2008 on Satellite System for Monitoring Fishing Vessels	Approved (25 June 2008)
Decree Law No. 26/2012 on the Basic Environmental Law	Approved (4 July 2012)
Decree Law No. 3/2003 on the establishment of the Port Authority	Approved
Decree Law No. 5/2004 General Fisheries Regulations	Approved (28 July 2004)
Decree Law No. 6/2004 General Bases of the Legal Regime for the Management and Regulation of Fisheries and Aquaculture	Approved (21 April 2004)
Decree Law No. 7/2002 on Maritime Boundaries of the Territory of the RDTL	Approved
Decree Law No. on Biodiversity (no ref number)	Drafted (March 2012)
Decree Law No.33/2017 Legal Framework for Cultural Heritage	Approved (6 June 2017)
Decree Law on Pollution Control and Hazardous Waste	Drafted
Decree No. 14/2017 establishing the Procedures for Submitting a Proposal for the Classification of Protected Area	Approved (29 March 2017)
Decree Law No. 5 /2011 on the Environmental Licensing	Approved (9 February 2011)
Joint Ministerial Diploma no. 11 / 2015 on Minimum sizes and weights for fishing	
Joint Ministerial Order No. 18/MAP/MCIA/II/2017 establishing the List of Protected Aquatic Species	Approved (12 April 2017)
Law outlining the Legal Regime for the Management and Regulation of Fisheries	Drafted (2019)

Table 3: Key legal and regulatory frameworks at the national level

C: Stakeholder Analysis

In relation to issues of sustainable development on Ataúro, there are a wide range of stakeholders to consider. As a part of the development partners workshop held in February 2020, stakeholders were identified and categorized by their levels of ‘interest’ in sustainability, and ‘influence’ over implementing sustainable development activities. This resulted in the following stakeholder map.

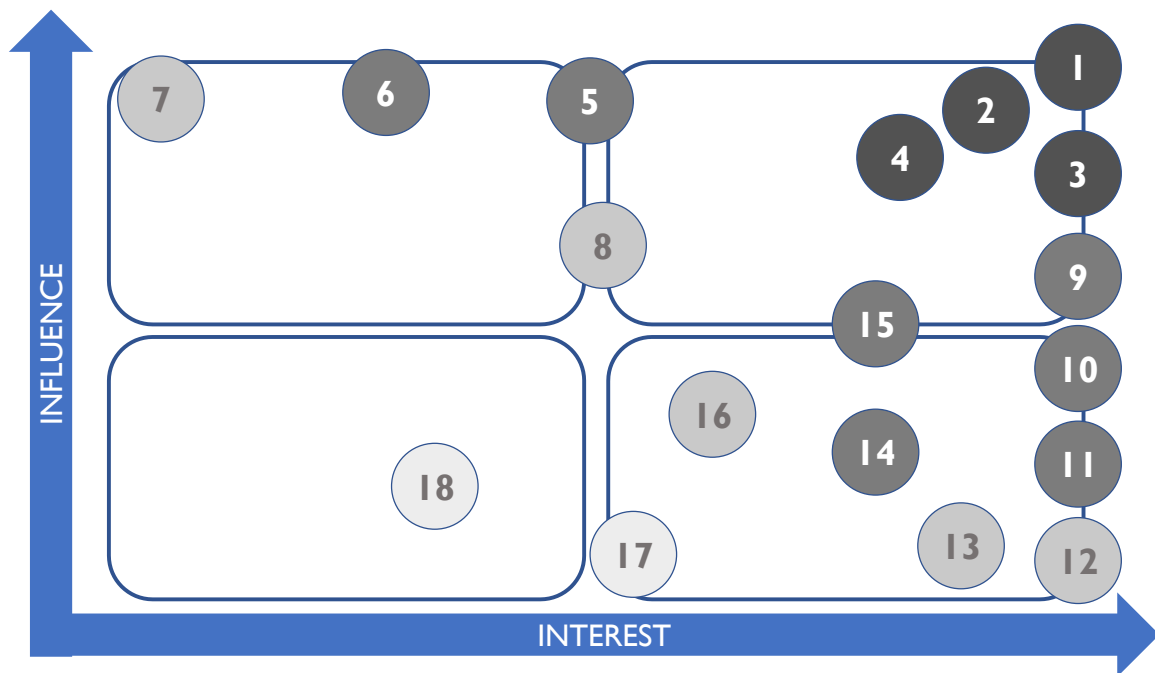


Figure 12: Stakeholder map showing comparative levels of influence and interest in sustainability issues.

REF NO.	STAKEHOLDER GROUPS IDENTIFIED	CATEGORIES OF INFLUENCE AND INTEREST IN SUSTAINABILITY
1	<ul style="list-style-type: none"> Government Fisheries Sector Government Environment Sector Government Agriculture Sector Local Ataúro NGOs Local Ataúro Leaders ATKOMA 	Stakeholders with combined high levels of interest and influence. These stakeholders are critical to engage in the implementation of sustainability initiatives.
2	<ul style="list-style-type: none"> Government Education Sector Donor agencies Seaweed Farmers Ataúro Hotel and Resort owners 	
3	<ul style="list-style-type: none"> National Timor-Leste NGOs 	
4	<ul style="list-style-type: none"> Government Tourism Sector Local media 	

REF NO.	STAKEHOLDER GROUPS IDENTIFIED	CATEGORIES OF INFLUENCE AND INTEREST IN SUSTAINABILITY
5	<ul style="list-style-type: none"> Church 	Stakeholders that hold considerable influence in society, but who are not necessarily interested in issues of sustainability. Engaging these stakeholders to increase their levels of interest and support for sustainability could contribute enormously to any initiative's success.
6	<ul style="list-style-type: none"> Traditional Clans 	
7	<ul style="list-style-type: none"> Ataúrian veterans Local political parties 	
8	<ul style="list-style-type: none"> Post Administration Maritime Police Traditional Leaders * 	Stakeholders that hold important roles in society, and by enhancing their levels of interest and commitment towards sustainability, and empowering them to foster further influence, will benefit long-term success.
9	<ul style="list-style-type: none"> International NGOs 	Stakeholders with considerable interest in sustainability, but only moderate levels of influence. These stakeholders can provide essential practical support and motivation for sustainability movements.
10	<ul style="list-style-type: none"> Homestay operators Dive operators Marine transport operators 	
11	<ul style="list-style-type: none"> Community volunteers Schools 	Stakeholders with high levels of interest, but relatively low levels of influence. In some instances, if empowered appropriately, these stakeholders can quickly galvanize change.
12	<ul style="list-style-type: none"> Women's groups Local artisans 	
13	<ul style="list-style-type: none"> Fishery businesses 	
14	<ul style="list-style-type: none"> Non-Ataúrian national investors ** 	
15	<ul style="list-style-type: none"> Fisher collectives International investors *** 	
16	<ul style="list-style-type: none"> Micro-finance groups Church youth groups 	
17	<ul style="list-style-type: none"> Restaurateurs and food outlet providers Land transportation providers 	Stakeholders considered to have generally limited levels of interest or influence in sustainability initiatives.
18	<ul style="list-style-type: none"> Government culture sector Retailers 	

* It is noted that levels of interest are varied between traditional leaders.

** It is noted that levels of influence amongst national, non-Ataúrian investors can vary.

*** International business investors may have varying levels of interest in sustainability compared to business profitability.

These results provide important guidance for stakeholders to engage when implementing sustainability activities on Ataúro Island. It also identifies stakeholders to target for improved awareness raising and those who could influence considerable positive change if engaged and supported appropriately.

In addition to stakeholder mapping, the existing 'strengths' of Ataúro that can support the effective implementation of sustainability related initiatives were identified as follows:

- Government officials on Ataúro are trusted by the communities, and there are strong connections between local government and the local population.
- There is a strong Island identity.
- Current key political figures are proactive and support the drive for sustainability.
- Ataúro is the birthplace of community-based ecotourism, and Ataúrians have already trained people in other areas of Timor-Leste (Ataúro is the 'poster child').
- There are existing good examples of sustainable tourism on Ataúro that could be replicated.
- There is an existing plan in place for the establishment of an island-wide Marine Protected Area (through the 'One Island, One Management' plan) that can guide resource management planning.
- Community regulations are in place and can work well.
- Ataúrians have resisted large-scale development partners.
- Ataúrian people are resilient, have local wisdom, and can show strong leadership.

Existing 'weaknesses' that may hinder sustainable development on Ataúro were also identified as follows:

- There is a lack of stakeholder and partner communication & coordination.
- There is a lack of education, engagement, human and financial resources and opportunities to make change.
- Communities are sometimes treated as "object" rather than "subject" by support partners.
- There are some jealousies within and between communities.
- Rumors can be prevalent and disruptive on Ataúro.
- Ataúrian people are fiercely independent.
- Defined gender roles limit the accessibility of women to engage in solutions.
- Ataúrians can sometimes have a short-term mind-set.
- There is a lack of leadership in coordinating and planning development projects.
- There is a lack of transparency amongst partners.
- There is a lack of accessible information to understand challenges and find ways to overcome them.

These strengths and weaknesses are important to consider, capitalize upon and / or address in the development of any sustainability related initiatives on Ataúro Island.

KEY SUSTAINABILITY CHALLENGES ON ATAÚRO

In order to advance the sustainable development of Ataúro, it is important to identify the current challenges to sustainability existing on the island. These are divided into three sectors.

- **Marine**
- **Terrestrial**
- **Socio-cultural**

MARINE – key challenges

A range of marine-related challenges on Ataúro were identified through stakeholder consultations. They are presented here in order of priority as determined by community members on the Island (see figure 13), combined with the results from government and development partner workshops.

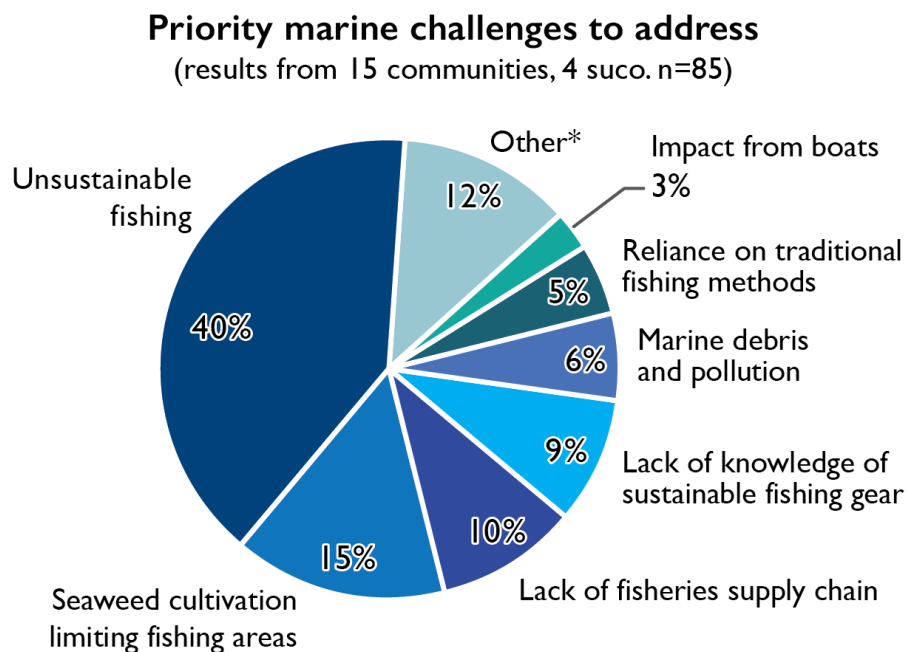


Figure 13: Priority marine challenges to address on Ataúro Island.

* Other priority challenges prioritized (and presented in this section) include: issues over tourism entry fee, lack of enforcement, fishing areas too distant, loss of marine habitat, climate change, Illegal wildlife extraction, lack of infrastructure for offshore fisheries.

- **Unsustainable fishing** – this includes overfishing and destructive fishing practices (including challenges of ghost nets and bomb fishing), leading to decline of fish stocks and threats to both fishery livelihoods and ecological integrity. Infiltration of outsider fishers and use of non-traditional gears have also been noted as threatening to traditional fishing practices.
- **Seaweed cultivation limiting fishing areas** – this issue is particularly noted in Suco Biqueli, where seaweed cultivation is considered to restrict travel by small boats and limit accessible fishing areas. In other areas however, similar issues are encountered in terms of **fishing grounds being too distant from villages** given the small boats and (oftentimes) lack of engines to reach optimally productive areas.
- **Lack of fisheries supply chain** – and associated facilities (such as cold storage and **infrastructure to support offshore fisheries**) has presented challenges to accessing wider markets for sale of fish and marine products (impacting overall income generation).
- **Lack of knowledge on sustainable fishing gear** – and lack of access to alternative gear types has led to a **reliance on traditional fishing methods** (and in some cases destructive practices).
- **Marine debris and pollution** – this includes plastics pollution (which is recognized as largely being brought into the area on currents from neighboring Indonesia), and marine contamination (through land-based pollutant run off from human activities, including sewage pollution, and sedimentation from the land as a result of deforestation), as well as boat-based oil pollution.
- **Impact from boats** – in addition to the concern over sea pollution from marine transportation, boat impacts on reefs have also been noted as a challenge, both from boat collisions with substrate and anchoring, as well as the resultant introduction of invasive species brought into the area via these vessels.
- **Loss of habitat** – the above challenges are compounded by extractive practices (such as cutting of mangroves and removal of coral), are also leading to concern over the loss of endemic species.
- **Climate Change** – including reef bleaching (through increased sea surface temperatures), ocean acidification, coastal abrasion and seaweed disease.

- **Lack of clarity related to the current and proposed marine management systems** – this relates to the planned gazettement of the area for conservation management (see box VI) and to the unclear management of the ‘reef tax’ (see box VII).

BOX VI: LACK OF CLARITY WITH CURRENT & PROPOSED MARINE MANAGEMENT SYSTEMS

This confusion falls under two key categories:

- (1) The current **marine managed areas** (MMAs) protected under *tara bandu* status have now been in place (and respected) for more than a year or two at most sites. Over this period some of the communities have proactively supported these sites and welcomed their presence, while others have become frustrated by, and negative towards them. The positioning of the first site in Adara (supported by WorldFish) was selected based on the area the community wanted to protect to promote tourist visitors to the area, and was not delineated with ecological or fishery related considerations in mind. The remaining 12 MMA sites (supported by Conservation International [CI]) were selected due to their close proximity to the communities (positioned largely directly in front of villages). This was intended to make the monitoring of the sites easier for the communities; but again, the sites were not delineated for protection based on ecological or fishery productivity considerations. Each of these *tara bandu* sites are ‘No Take Zones’ (NTZ) with extraction activities prohibited and utilization limited. Having NTZs positioned directly in front of villages means all fishers must travel further to source fish. This approach contravenes recognized best-practice for zoning design, as it unfairly disadvantages those without the means to travel easily beyond the *tara bandu* borders. This is particularly relevant for women gleaners, whose access to marine resources has become severely impaired in some areas.

On top of this, there remains some confusion about the *tara bandu* regulations amongst some of the communities, suggesting that socialization (and engagement in development) was not entirely effective. For example, many communities are concerned they are now ‘stuck’ with the sites, having agreed to them; whereas in fact the Suco regulations for each MMA includes a proviso whereby the sites can be assessed and any adjustments made every two years.

Box VI Continued...

(2) The second area of confusion over marine management is the currently **conflicting proposals** that have emerged from two different development partners concerning the future of marine gazettelement.

- The establishment of a **National Park** — has been proposed by partners CI. This includes conferring protected status to both land and sea areas. While the entire land and sea area of Ataúro would be under national park status, there would be zones delineated for permitted and prohibited usage. In the draft / preliminary zoning plan developed by CI, marine ‘core zones’ (no-take) correspond directly with the existing *tara bandu* sites (which would effectively ‘lock in’ these sites as permanently protected, superseding the Suco Regulations), with all other reef areas also prohibiting fishing and gleaning (with only offshore fisheries permitted). On land, the vast majority of the island is also classified as protected in the draft plan, with no extraction, development, agriculture, livestock, logging or hunting permitted. It is recognized the current draft is only preliminary and further assessment and consultation would be required to refine the zoning accordingly, as in its current form the impacts to livelihoods for people on Ataúro would be considerable.
- The establishment of an **Aquatic Reserve / Marine Protected Area (MPA)** – has been proposed by partners Coral Triangle Center (CTC). This refers to only the marine environment surrounding Ataúro Island and does not include any land-based management. The entire marine area of Ataúro would be under MPA designation, with zones delineated for permitted and prohibited usage. The zoning plan has been developed factoring in and recognizing a range of use-areas as determined through community consultations, and includes proposed prohibitions to damaging activities. Within this zoning plan, the current *tara bandu* MMA’s have also been recognized as core (no take) zones, with additional core zones added based on fishery and biodiversity considerations. The plan submitted for Ministerial decree in 2019 includes details on collaborative management frameworks and has been reviewed and approved by the Chefe Suco.

BOX VII: THE TARA BANDU DIVE FEE / 'REEF TAX'

The *tara bandu* fee is a charge made to all dive and snorkel tourists wishing to access a *tara bandu* site. Locally referred to as a 'reef tax' this charge is intended to be collected and dispersed to local communities to incentivize the effective management of, and compliance with, these no-take zones. The current fee is \$2 USD per diver or snorkeler. The fee is charged only to marine tourists, and (at the time of writing) is currently being somewhat loosely administered by participating private sector entities. However, a lack of clarity persists with regard to the collection and distribution systems across the island, including some confusion with regards to equitable divisions of the funds generated, and conflicting ideas on accepted use of the funds.

Marine challenges continued:

- **Lack of enforcement** – including a lack of clarity over the *tara bandu* regulations making enforcement challenging (see box VI), the encroachment of outsider fishers into the area, and lack of law enforcement for protected marine species.
- **Wildlife management** – related to, and reinforcing concerns around the lack of enforcement, these challenges included observations of coral gleaning and illegal turtle harvesting.
- **Unsustainable marine tourism** – while not currently considered a 'problem' on Ataúro, it has been noted as a concern as the market for marine visitors continues to increase on the island.
- **Lack of alternative livelihoods** – with people continuing to rely on the natural resources of Ataúro and work in extractive industries (such as fishing) due to a lack of alternative options.
- **Maritime boundary security** – has also been noted of concern given Ataúro's close proximity to the outer boundary of Timor-Leste's waters.

Many of the above challenges are indicative of a **lack of clear marine and coastal sustainable management systems**. Recommendations for addressing the above challenges are outlined in the section on management objectives.

TERRESTRIAL – key challenges

A range of land-based challenges on Ataúro were identified through stakeholder consultations. They are presented here in order of priority as determined by community members on the Island (see figure 14), combined with the results from government and development partner workshops.

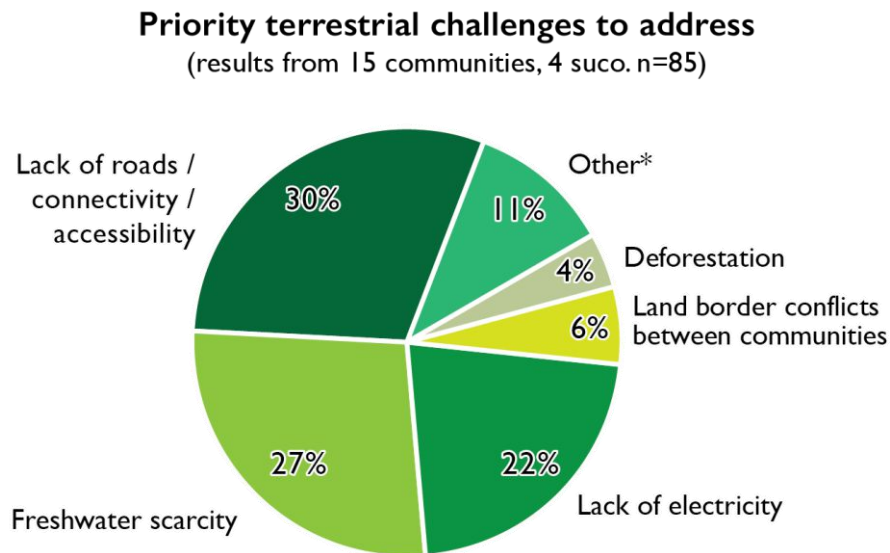


Figure 14: Priority terrestrial challenges to address on Ataúro Island.

* Other priority challenges prioritized (and presented in this section) include: lack of appropriate land-use planning, lack of waste management, lack of public transport, unsustainable hunting, impact of domestic animals on land, lack of diversity of livestock, concerns over food security (as communities continue to rely on local natural resources), climate change and increased natural disasters (and impact on infrastructure / houses), lack of sustainable agricultural practices, seawater intrusion in water wells and the impact of tourism.

- **Connectivity / accessibility** – is a challenge throughout Ataúro due to poor / absent road connections that result in a restriction of peoples’ access to education, livelihood and development opportunities.
- **Freshwater scarcity** – is a common challenge for many, and is linked to a lack of land use planning and management of water catchment areas, with Ataúro experiencing critical water scarcity in some areas, compounded by a lack of knowledge, resources and opportunities to optimize water sources and water conservation. This is further compounded by increasing levels of **seawater intrusion** into well waters due to over-extraction.
- **Lack of electricity** – with some regions having little to no access to the diesel-powered main grid provider in Vila-Maumeta or associated smaller grid set-ups in other communities.

While some remote sites have begun to use photovoltaic panels for energy production, their use is still small-scale and limited.

- **Land border conflicts** – are occurring between communities and between individuals within communities as the population of the island increases, causing a greater pressure for land.
- **Deforestation** – is of concern, particularly in relation to illegal logging and slash-and-burn practices leading to a loss of biodiversity, increased landslides, a loss of water courses, the invasion of weeds on indigenous areas, and a degradation of land/soil fertility and integrity; all linked to a noted lack of forest conservation and management practices.
- **Lack of waste management** – has resulted in challenges managing solid waste (general rubbish and plastics) and liquid waste (including sewage) resulting in concerns over sanitation in several areas.
- **Lack of sustainable agricultural practices** – includes a lack of management over unused land and lack of sustainable utilization practices leading to degradation of the terrestrial environment and exacerbating land-use conflicts in some regions.
- **Domesticated animal husbandry** – is suffering from a lack of genetic diversity and robustness of stock due to the islands' isolation, and increasingly the presence of livestock is having an impact on the natural environment.
- **Hunting wildlife** – such as pigs, deer's and monkeys is impacting biodiversity on the island; which has further been compounded by the arrival of alien species (such as snakes and lizards) changing the indigenous ecology of the area, and the lack of protection for fauna.
- **Climate change** – is thought to cause an increased risk of natural disasters and associated impacts on infrastructure, housing etc.

Most of the above challenges are indicative of a **lack of appropriate land-use planning**. With increasing pressures on the land, the lack of planning is leading to unauthorized farm expansions and unplanned infrastructure development (including hotels and tourism infrastructure), impacting access for residents to some areas of the island (compounded by lack of development planning for roads etc.), and impacting wildlife. Development has also not taken onboard traditional knowledge of the area, leading to increased bush fires and a lack of water catchment management. Recommendations for addressing the above challenges are outlined in the section on management objectives.

SOCIO-CULTURAL – key challenges

A range of socio-cultural challenges on Ataúro were identified through stakeholder consultations. They are presented here in order of priority as determined by community members on the Island (see figure 15), combined with the results from government and development partner workshops.

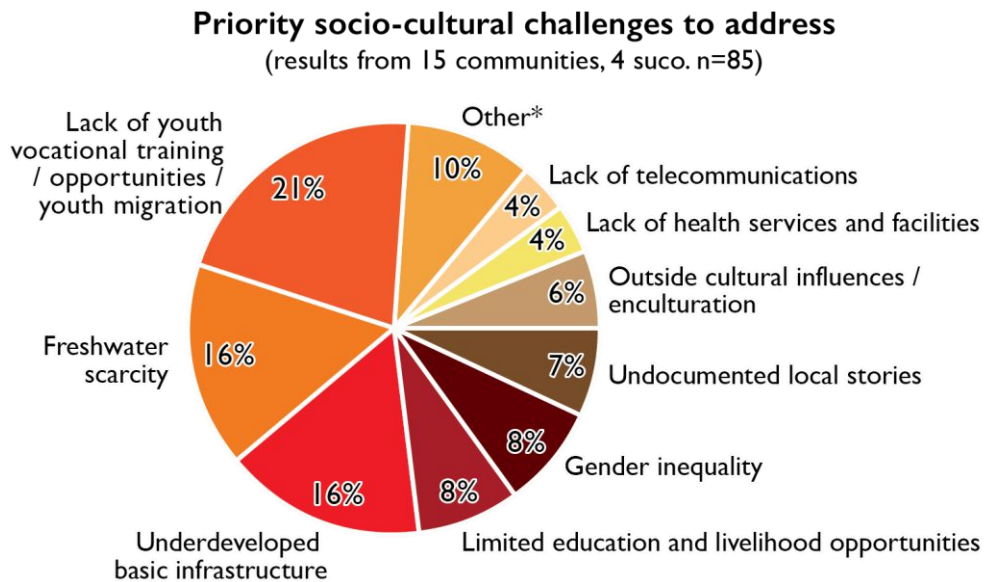


Figure 15: Priority socio-cultural challenges to address on Ataúro Island.

* Other priority challenges prioritized (and presented in this section) include: unprotected sites of cultural and historical importance, conflicts between communities over historical sites for tourism, lack of tourism business knowledge and opportunities, loss of indigenous culture, conflicts over historical sites and land for tourism, lack of musical instruments for youths, under-age marriage.

- **Youth migration** – with a lack of school facilities, as well as a lack of vocational training opportunities, the younger generation of Ataúro is increasingly migrating away from the island. This is a concern for many community members whose families are losing their younger members, with the potential to lead to an ageing indigenous population. The limited job opportunities that do exist (in tourism and such like) are often taken by non-Ataúrians who have the necessary training/skills. Without opportunities to build those skills on the island, the local young population are becoming disenfranchised and lacking interest in traditional socio-cultural customs and practices.
- **Limited education and livelihood opportunities** – with a lack of school facilities resulting in youths migrating off the island or leaving school at a young age, knowledge, awareness and interest in socio-cultural integrity is challenged; and where there is a lack of alternative livelihoods and income-generating activities, concerns for culture and heritage

become secondary to concerns of making a living (which generally relies upon natural resources and can in turn create conflict within communities, including land tenure disputes).

- **Underdeveloped basic infrastructure** – is a challenge prevalent in many areas of Ataúro. This has been particularly noted in Maquili, where community members feel their basic infrastructure is lagging behind other areas of Ataúro; in Beloi, where the women's group are cognizant of a lack of modern facilities / machines to grow their traditional clay pot production; and in Biqueli, where communities feel there is a lack of a sub-village center.
- **Gender inequality** – has a negative impact on sustainable development. This includes the impact of continued misplaced assumptions on gender roles in communities (for example, women have become increasingly involved in fisheries, particularly spear fishing, in recent years and yet remain under-represented in discourse and decision-making concerning fishery management; likewise women are often involved in the daily management of farms and livestock, and yet have limited opportunities to share their insights and suggestions for improved land management). Gender inequalities also lead to a lack of opportunities, particularly for young women in society, with impacts including social inequities and loss of development potential.
- **Undocumented local stories** – with much of Ataúrian history residing in oral stories and largely undocumented, there is a risk of socio-cultural heritage and traditional wisdom being lost.
- **Outside cultural influences** – are a concern related to outsider visitors to the area. Concerns include a decreasing of local values and enculturation of Ataúrian society that decreases cultural respect; particularly with regards to dress codes, social lifestyles, and respecting the need for limited activities on religious days. The arrival of technologies on the island and their influence and implications have also been noted with concern by some.
- **Lack of telecommunications** – while emerging technologies are an issue of concern for some Ataúrians keen to retain socio-cultural traditions, for others the lack of telecommunications and associated access to learning, communications platforms and opportunities is considered vital to address, particularly in relation to counteracting youth migration as well as ensuring IT infrastructure is in place to support the growing tourism enterprises on the island.

- **Lack of health services and facilities** – is a key challenge to address in striving for sustainable development world-over. On Ataúro, the limited medical infrastructure impacts the health and well-being of Ataúrians, as well as limits security for visitors to the island.
- **Unprotected heritage sites** – with many sites of cultural and historical importance currently unprotected or managed.
- **Mass tourism / bad tourism** – is seen as a risk to local livelihoods where tourism developments are led by external bodies, with local communities concurrently finding it challenging to tap into tourist-related business opportunities due to a lack of access to opportunities and resources to develop skills and capacity in this area.
- **Loss of Indigenous culture (practice and knowledge)** – including a lack of awareness of cultural events and festivals that take place, and a lack of appreciation over local cuisine, traditional medicines, local products, Ataúrian traditional housing, rituals, languages, island-based faith and other Ataúrian practices.
- **Lack of community engagement and coordination** – is seen as compounding these challenges to socio-cultural integrity on the island; including a lack of local engagement in planning and a reduction in understanding of local decision-making processes. Conflicts of interest exacerbate this issue of coordination, with a lack of community cooperatives existing to strengthen systems.

In order to address the above **marine**, **terrestrial** and **socio-cultural** challenges that have been identified, it is necessary to develop a ‘vision’ of sustainability for the island and associated management objectives and targets. The following section outlines this vision and associated objectives, as developed through a range of consultations with government, local communities and development partner stakeholders (see appendix one for full information regarding the consultations undertaken).

VISION STATEMENT

The vision statement for Ataúro Island has been developed as follows:

“Ataúro’s biodiversity and natural environment is protected, essential ecosystems are secured for people and nature, and livelihoods are sustainable and support the preservation of social and cultural heritage.”

MANAGEMENT OBJECTIVES AND TARGETS: 2021-2025

The following management objectives and targets aim to provide a clear pathway forward over the coming five years to achieve this vision, and to address the challenges identified in the previous section.

While these draft management objectives are presented in this section under the three headers of **marine**, **terrestrial** and **socio-cultural** (in order to address the challenges identified under these three sectors), a summarized consolidated pathway forward for sustainability on Ataúro Island is presented in figure 20 on page 67, integrating all key objectives of the three sectors addressed into one clear roadmap.

These management objectives not only aim to achieve the above vision, but also aim to support the nation of Timor-Leste in contributing to national targets and international commitments.

Ideally, development partners interested to support work on Ataúro will make efforts to ensure their activities align with one or more of the management objectives presented in this plan, and will work together collaboratively and in a coordinated fashion to support the attainment of these objectives.

MARINE

In order to address the marine-related challenges identified, as well as capitalize on the existing strengths of Ataúro and navigate any existing weaknesses, the following management objectives have been identified. Note: these objectives are not linear in time, and many should be implemented concurrently. See figure 17 for an overview of the recommended stepwise approach for implementation.

Management Objectives		Targets	Year
M-1	Secure the sustainable management of Ataúro's marine and coastal environment through the establishment of a Marine Protected Area (MPA), with full stakeholder engagement and support.	MPA proposal reviewed, updated where required, agreed and finalized with all key stakeholders	1
			2
			3
			4
			5
<p>It is recognized that establishing a clearly designated and effectively managed MPA on Ataúro may effectively address many of the identified challenges concurrently, as long as the MPA is:</p> <ul style="list-style-type: none"> (i) designed to support sustainable fisheries and safeguard areas for enhanced marine biodiversity conservation and tourism activities, (ii) developed in collaboration with communities and with clarity over designation and roles; (iii) designed to be collaboratively managed and enforced with full community engagement; (iv) supported through a clear reef tax / fee mechanism that is accepted and equitable for communities; and (v) developed concurrently with advances in sustainable fisheries management technologies and improved market mechanisms. <p>An MPA proposal has already been developed through the One Island One Management (OIOM) plan supported by the Department of Fisheries (under MAF), the Chefe Suco and Post Administrator, with technical support provided by the Coral Triangle Center (CTC). The plan states that the MPA zoning design proposed has been designed to support sustainable fisheries and safeguard areas for biodiversity conservation and enhanced marine tourism activities (point i above), as well as designed to be collaboratively managed and enforced with full community engagement (point iii above). Various consultations have also already taken place related to this plan (point ii above).</p> <p>The existing OIOM plan brings together all <i>tara bandu</i> sites (as no-take zones / NTZs) as well as the existing Vila MPA under one management umbrella, and includes wider zoned areas for biodiversity protection, marine tourism and sustainable fisheries. Therefore, the finalization process for this plan should include a suco review of the existing <i>tara bandu</i> sites (already undertaken in some of the sites) and agreement should be secured from the communities whether or not to (a) cement these sites into the OIOM zoning plan as permanent NTZs (as proposed), or (b) adjust the sites based on scientific and socioeconomic considerations to develop revised sites that can then be recognized and incorporated into the final OIOM plan. Furthermore, zonation for seaweed cultivation needs to be further discussed with communities (particularly in Biqueli) to ensure equitable access to marine resources for local fishers and gleaners.</p> <p>Finalization and implementation of this plan will ultimately require full buy-in and support from all key stakeholders including: all Chefe Suco and community representatives (with mixed gender and youth representation); all key district and municipal government agencies, and relevant national government agencies (MAF, Pescas etc.); and all other marine and coastal livelihood related NGOs / Civil Society Organizations [CSOs] active on Ataúro (e.g. Blue Ventures, Conservation International, WorldFish, Roman Luan and ATKOMA).</p>			
M-2	Attain formal recognition of MPA status.	Ataúro Island's marine and coastal environment is gazetted under formal protected status	1
			2
			3
			4
			5

Management Objectives		Targets	Year
<p>Endorsement of this plan is currently expected under the Department of Fisheries (Pescas), Decree Law no. 6/2004 on Fisheries Management as an Aquatic Reserve. However, it is worth noting that at the time of writing (May 2020) a new law (on the 'Legal Regime for the Management and Regulation of Fisheries) is currently going through Ministerial approval and is expected to supersede the existing law no. 6/2004. Therefore, clarity will be required on whether endorsement under the old law would be recognized under the new regime, or if re-gazettement would be required once the new regime comes into effect.</p> <p>Once the marine area of Ataúro is gazetted as an MPA it will be essential to establish effective management systems in order to ensure some of the key marine challenges identified in the previous section are addressed through this work, particularly: unsustainable and destructive fishing, marine debris, impact from boats, loss of marine habitat (coral and mangroves), wildlife management (coral gleaning and illegal turtle harvesting) and maritime boundary security.</p> <p>Having a formally established MPA with full stakeholder support will also resolve the challenges identified in the previous section concerning lack of clarity around marine management; and establishing a collaborative management unit will address the issue of lack of enforcement (see next points).</p>			
M-3	Establish a collaborative management unit for the MPA.	Collaborative MPA Management Unit established.	1
			2
			3
			4
			5
<p>The current management unit design for the Ataúro MPA under the OIOM proposal (submitted 27th September 2019) is shown in Appendix Six. While the proposed structure meets most best-practice principles, including strong representation of communities and engagement of communities in patrol and surveillance activities (further addressed in Obj. M-6) it is noted that there is currently no mention of private sector representation in this unit. Therefore, it is recommended these stakeholders also be represented through inclusion of ATKOMA in the management unit.</p>			
M-4	Develop a Management Plan for the MPA with measures in place to assess effectiveness.	Management Plan is in place, with appropriate biodiversity, fisheries, tourism and socio-economic indicators of effectiveness	1
			2
			3
			4
			5
<p>An MPA management plan, outlining the objectives of the site, the targets aimed for, clear roles and responsibilities of stakeholders, and with a clear monitoring, evaluation and learning component embedded in the plan (with clear indicators for success) will be essential for the successful implementation and effective management of the site. This should include the following: Biodiversity indicators (with targets); Fisheries indicators (to integrate with local fishery cooperatives, with measures to include local boat registration and the promotion of traditional sustainable fishing gears); Marine tourism indicators (community-based, with an emphasis on eco-voluntourism, community development, megafauna and coral reefs); and Socio-economic indicators (to ensure benefit-streaming from MPA management is focused towards local communities).</p> <p>The management plan should also include considerations for supporting shoreline integrity in the face of rising sea levels and coastal erosion, in particular finding ecologically appropriate mechanisms to secure sea defenses (such as planting mangroves or providing natural wave energy buffers).</p>			
M-5	Secure sustainable financing for MPA operations through a combination of state support (where possible) and through an agreed portion of a one-stop tourism user fee (TUF) 'reef tax' for Ataúro Island.	Sustainable financing for MPA operations established and functioning effectively.	1
			2
			3
			4
			5

Management Objectives	Targets	. Year						
<p>The OIOM plan (shown in Appendix six) proposes that the MPA management unit be given the authority to collect an entrance fee to Ataúro. Clarity around this is required however, as it is unclear whether the revenue is expected to be handled via central government offices or remain locally accessible (which is essential to ensure finances are locally available).</p> <p>In addition to this, there are already other fee-based systems proposed or already active on Ataúro Island, namely:</p> <ul style="list-style-type: none"> • Proposal to charge a tourism fee on the island to be managed through a visitors' center, most likely through ATKOMA association. • Existing <i>tara bandu</i> user fee / 'reef tax' (currently being loosely administered by private sector partners, but requiring clarity). <p>Therefore, adding an MPA fee would complicate the already complex layers of fees to visitors being developed. Such multi-layered fee systems can lead to stakeholder conflict, and are highly off-putting for visitors, who may end up avoiding to visit the area due to the high costs, confusion and lack of clarity and accountability.</p> <p>Therefore, it is recommended that a Single One-Stop Fee System be established for all visitors to Ataúro, whereby the revenue generated is managed at the Post Administration level (not central government) and the funds generated are split between the relevant groups. Visitors to Ataúro are expected to largely arrive on the island via the Beloi landing site (and increasingly Adara area), and the Single One-Stop Fee could be charged at the proposed Visitors Center in Beloi (see figure 13), and associated post in Adara, and administered by ATKOMA. The splitting of the revenue would need to be agreed by all stakeholders, but is recommended to be divided into the following categories:</p> <ul style="list-style-type: none"> • XX % - provided directly to, and divided between, the five suco (communities), potentially with weighting depending on the area of waters under NTZ (<i>tara bandu</i>) status in each suco, OR simply split equally to promote inter-suco collaboration. This portion could be dispatched through the Post Administrator and Chefe Suco. • XX % - provided to support Visitor Center operations, administered through ATKOMA. • XX % - provided to the MPA Collaborative Management Unit. <p>The amount of the fee would also need to be agreed through stakeholder consultations. Ideally the amount charged would be based on:</p> <ol style="list-style-type: none"> (a) a financial assessment of MPA running costs needed, (b) an assessment of Visitor Center operational costs, and (c) a willingness-to-pay (WTP) assessment undertaken with visitors to the island. <p>Ultimately, the simpler the fee, the more straightforward, transparent and accountable the system can be, and this in turn generates trust and willingness from visitors to pay. Therefore, this simple, one-off fee to all international visitors to Ataúro when they arrive on the island (via the Visitor Center) would be irrelevant of how long the visitor aims to stay, or whether they aim to utilize the marine environment. It would simply be a flat arrival fee, equitable for all international arrivals (i.e. payable by all non-Timorese visitors).</p>								
M-6	Establish conservation area patrol, surveillance and enforcement (PSE) systems that engage local community rangers and are tailored to enable community governance over zoned areas under their customary tenure.	Marine conservation zones are effectively enforced through community engagement	<table border="1"> <tr><td>1</td></tr> <tr><td>2</td></tr> <tr><td>3</td></tr> <tr><td>4</td></tr> <tr><td>5</td></tr> </table>	1	2	3	4	5
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<p>This will be a critical element of the work to enforce management of the MPA zones, and promote compliance with MPA limitations and restrictions in key areas. Community surveillance teams will need to be established for each marine area under different suco or aldeia governance / tenure, and community patrol teams should be recruited, trained and supported to manage their areas using educative enforcement techniques.⁹</p>								

⁹ Educative Enforcement Techniques (EET) have been shown to achieve the highest levels of efficacy in protected area management. This approach promotes a positive, friendly engagement between enforcers (surveillance teams) and potential perpetrators of MPA violations / those not complying with MPA regulations. Surveillance teams have educational resources to share with perpetrators, explain the reasoning behind the regulations, and use positive persuasion

Management Objectives		Targets	Year
M-7	Ensure regulatory frameworks for implementing marine management are aligned and support proactive implementation.	Regulatory frameworks proactively support implementation of the plan	1
			2
			3
			4
			5
<p>For all of the above processes, the regulatory framework needs to be in place to support the above actions. For example, regulatory requirements on collecting and distributing TUFs, and frameworks on community PSE, should all ideally be supported under the laws of Timor-Leste.</p>			
M-8	Establish routine monitoring of indicators outlined in objective M-4 to ensure the MPA is achieving its targets, and adaptive management is in place to respond to incidences and challenges in real-time.	Management targets are routinely monitored, indicators are tracked, and management is adaptive.	1
			2
			3
			4
			5
<p>Monitoring MPA targets and indicators should be routine, and implemented collaboratively with local communities, NGO partners and district government. Clear processes for reviewing the results of monitoring within the MPA management unit should be in place, and clear governance established to respond effectively to observations through adaptive management.</p>			
M-9	Explore, identify and implement improved sustainable fisheries management support across Ataúro.	Fishery management (from catch through supply chain) is enhanced for sustainability and optimal revenue generation	1
			2
			3
			4
			5
<p>A concerted effort is required to explore and identify mechanisms for improved sustainable fishery management throughout Ataúro. This may include support for the installation of FADs (building on the existing work of WorldFish and partners) for increased offshore/ pelagic fisheries; provision of alternative environmentally-friendly fishing gears, engines and associated equipment to promote fishing activities that do not harm marine habitat and associated biota and reduce bycatch; provision of cold storage and associated fisheries infrastructure to reduce loss of catch through spoilage, optimize value-add to catches, and enable greater access to markets and associated improvements in the supply chain.</p>			
M-10	Provide awareness raising, education and capacity building to local communities on sustainable marine management, including sustainable fisheries, MPA management and PSE.	Capacity building and education opportunities provided to local communities	1
			2
			3
			4
			5
<p>Throughout the above processes, awareness raising, education and capacity building with local communities will be critical to the success of the initiatives. Awareness on MPAs, their meaning, management, importance and contribution to socio-economic improvements, will be vital for building support and compliance. Training on community PSE will be essential to advance education enforcement at the site, and to ensure effective, collaborative management. Skills-building on sustainable fisheries gears, technologies and opportunities will be vital to improve effective fishery management, increase the productive value of the fishery, avoid bycatch, and enable greater access to sustainable markets for improved livelihoods.</p>			

communication techniques to promote compliance. Through EET, heavy-handed tactics or use of force are never used; and legal follow-up (i.e. involvement of police and arrests) are only used as a last resort on occasions where the educative approach has failed and individuals/vessels are recorded as repeat offenders (i.e. three occasions or more). Considerable resources are available on EET and community surveillance systems that could be utilized and adapted for the Ataúro Island context.



Figure 16: Plans for the Atauro Visitor and Conservation Center (USAID's Tourism For All Project).

Note: Through the workshops, stakeholder discussions and community consultations, a range of additional recommendations emerged under the marine sector (such as supporting alternative livelihood development, promoting renewable energy on the island, and implementing a zero-one-use plastics policy on the island and establishing local waste management and recycling schemes). For clarity, and to avoid replication in this plan, these recommendations and their associated draft management objectives have been moved under the relevant sections on **Terrestrial** and **Socio-Cultural** Objectives.

With regards to implementing these objectives, the below broad timeline presents a clear pathway forward for the coming five years (2021 – 2025).

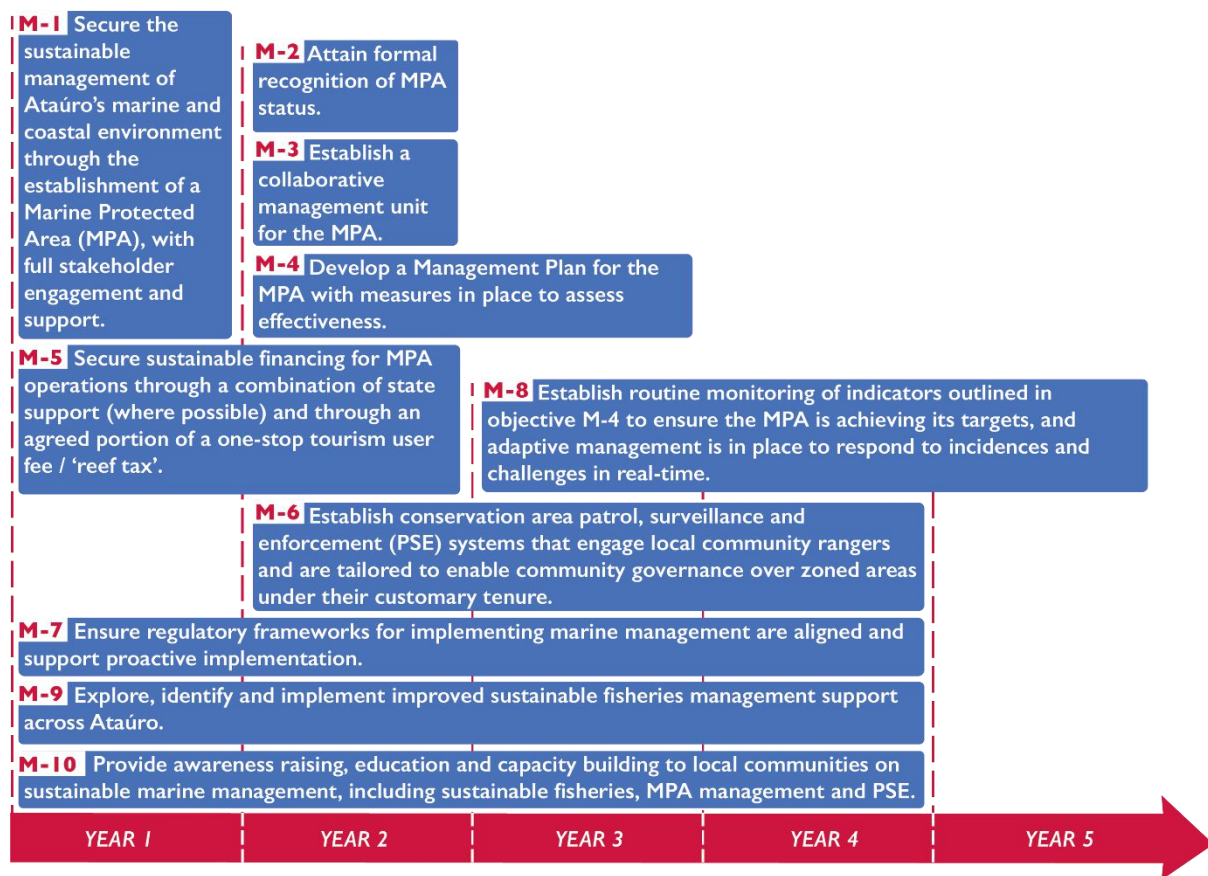


Figure 17: Broad timeline / sequence of steps for implementing draft marine objectives

TERRESTRIAL

In order to address the terrestrial-related challenges identified, as well as capitalize on the existing strengths of Ataúro and navigate any existing weaknesses, the following management objectives have been identified. Note: these objectives are not linear in time, and many should be implemented concurrently. See figure 18 for an overview of the recommended stepwise approach for implementation.

Preliminary Draft Management Objectives		Draft Targets	Year
T-1	Create a stakeholder team for land-use planning and development, to promote collaboration within and between development partners, local government and communities.	Stakeholder platform established and operating effectively.	1
			2
			3
			4
			5
<p>This stakeholder team would be established to develop the land-use zoning plan described in the next objective. The team should include representatives from: communities, local government (Chefe Suco and Post Administrator), land-use related development partners (e.g. ATKOMA, Roman Luan, Permatil, Mercy Corps, CI, MTA, EmprezaDiak, FAO and NaTerra), private sector representatives, ZEESMs and potentially donors.</p>			
T-2	Develop a land zoning plan for the island that supports conservation, sustainable management, local livelihoods, and sites of socio-cultural and historical importance; considers latest information, and complements the marine zoning plan in order to ensure a ‘ridge-to-reef’ approach to sustainable management of the island.	Land zoning plan completed.	1
			2
			3
			4
			5
<p>It is recognized that the ZEESM’s spatial planning document for Ataúro (2015) was very thorough and outlined a range of land-use planning steps, particularly with regards to road connectivity and associated infrastructure (including electrical infrastructure). The land-use planning approach suggested in this T-2 objective would aim to build upon and update this work to the latest land context and with sustainable management and environmental conservation considerations.</p> <p>Key areas the land-use zoning plan should address include the challenges raised (see previous section), such as the identification of:</p> <ul style="list-style-type: none"> • key water catchment areas for protection; • key forest habitat areas (outside of Manucoco) to be secured for plant, animal and bird biodiversity, as well as areas to ensure ecological connectivity between sites and promote climate change resilience; • key sites of cultural and historical importance for preservation (see Obj. S-3); • key areas for agriculture, permaculture and cultivation (see Obj. S-1); • residential areas (with consideration given to implementing conflict resolution support to resolve existing land border conflicts and issuing associated land certificates where appropriate); • potential routes for road construction (see Obj. T-3); and • potential areas for sustainable development and tourism infrastructure investment. <p>The collaborative land-use plan should both identify the above areas, and develop proposed zoning rules (for permitted and prohibited usage and activities), as well as targets for management and indicators to measure success. Throughout the process, the land-use plan will need to consider the impact of land-use practices on the marine and coastal environment (particularly the impact of pollution run-off into the marine environment), and should aim to integrate in the future with the MPA zoning plan (see Obj. M-1). Through this approach, it will then be possible to explore conjoining the land and marine zoning plans to upgrade the entirety of Ataúro Island as a multi-zoned holistic protected area / National Park (as outlined in Obj. T-6).</p>			

Preliminary Draft Management Objectives		Draft Targets	Year
T-3	Establish improved road connectivity through the island following best-practice principles for land, soil, slope and natural habitat integrity to promote connectivity and improve access to opportunities and markets for improved livelihoods.	Road connectivity meets sustainability criteria and is sufficient throughout Ataúro to enable movement of people and goods	1
			2
			3
			4
			5
<p>Research and expert guidance are required to support the design, development and infrastructural establishment of roads to connect communities across Ataúro Island. The design of this road network should consider best-practice principles to ensure:</p> <ul style="list-style-type: none"> (i) roads do not divide or intersect areas of high conservation value; (ii) road construction causes minimal disturbance or removal of natural habitat; (iii) road positioning considers land, soil and slope integrity to ensure road safety and robustness over time; (iv) routes are identified to optimize linkages and connectivity between communities while minimizing construction requirements; and (v) local workforces are recruited wherever possible and provided appropriate training to be involved in the construction process. <p>In particular, communities note the need to fix the road to Maqueli village and to improve the condition of the main road from Beloi to Macadade.</p>			
T-4	Advance water conservation, collection, distribution and management systems to address water scarcity on the island, and provide education on conservation and collection techniques to optimize adoption.	Sufficient water is available for the people and nature of Ataúro	1
			2
			3
			4
			5
<p>Research and expert guidance are required to support improved acquisition, storage, distribution and management of fresh and potable water on the island. Several initiatives have already been trialed on Ataúro, including rainwater harvesting (by Permatil, Mercy Corps and other groups) and solar water generating panels (by CI). Results and lessons learned from these trials should be incorporated into holistic research to find best-fit solutions to the issue of water scarcity, and to roll out / replicate systems (where appropriate) without impacting on natural water course-ways and water resources for the natural environment and ecological systems and services of the island. Communities on Atauro have also proposed exploring options such as deep-well drilling for water, improved canalization systems and sea water desalinization.</p>			
T-5	Promote and establish renewable energy systems on the island to combat climate change and become a showcase site in Timor-Leste for best-practice remote area energy provision.	Ataúro Island is powered by sustainable renewable energies	1
			2
			3
			4
			5
<p>While it is recognized that climate change is a global issue that is beyond Ataúro's ability to address, a renewable energy program on the island would both provide much needed electrification for the island (particularly in the more remote areas), and would showcase sustainable energy approaches for wider adoption regionally and nationally.</p> <p>Ataúro Island is blessed with abundant resources that may be further explored to support renewable energy, including: sunlight (for photovoltaic electricity), strong sea and mountain breezes (for wind energy), and tides (for tidal and kinetic energy). Powering the entire island with renewable energy systems should be highly feasible, but will require further research, impact assessments, funding and appropriate expertise to implement; as well as the training of local counterparts to ensure effective long-term maintenance and reliability of renewal energy infrastructure. If achieved, Ataúro Island could be one of the few islands in the world entirely powered by renewable energy, providing important marketing exposure for the island to generate visitors, as well as providing base energy needs for both the local population and the emerging eco-tourism market on the island.</p>			

Preliminary Draft Management Objectives		Draft Targets	Year
T-6	Explore conjoining the land and marine spatial plans and associated zoning regulations into one coherent island-wide plan for upgraded protected area status (potentially as a multi-zoned National Park).	Land and marine plans are integrated for overall Island-wide protected status.	1
			2
			3
			4
			5
<p>With the conjoining of the MPA with the land-use zoning plan, it may be possible to gazette the entirety of Ataúro Island as a multi-zoned protected area (e.g. National Park). The MPA management unit that would be already existing by this time could be advanced to become the local-level National Park management unit, in collaboration with the national government agency responsible for parks.</p> <p>As a part of this exploration process, it will be essential to ensure that revenues generated through the 'Single One-Stop Fee System' (as outlined in Obj. M-5) continues to be collected and distributed locally as well as secure further state financing and support wherever possible to finance the expanded tasks of the management unit.</p> <p>Similarly to MPA management and enforcement systems, local community members should at all times be engaged and involved in park management, with community-driven systems for enforcing park regulations.</p>			

Note: Through the workshops, stakeholder discussions and community consultations, a range of additional recommendations emerged under the marine sector (such as supporting alternative livelihood development, preserving cultural and historical sites of importance, and implementing a zero-one-use plastics policy on the island). For clarity, and to avoid replication in this plan, these recommendations and their associated draft management objectives have been moved under the below section on **Socio-Cultural** Objectives.

With regards to implementing these objectives, the below broad timeline presents a clear pathway forward for the coming five years (2021 – 2025).

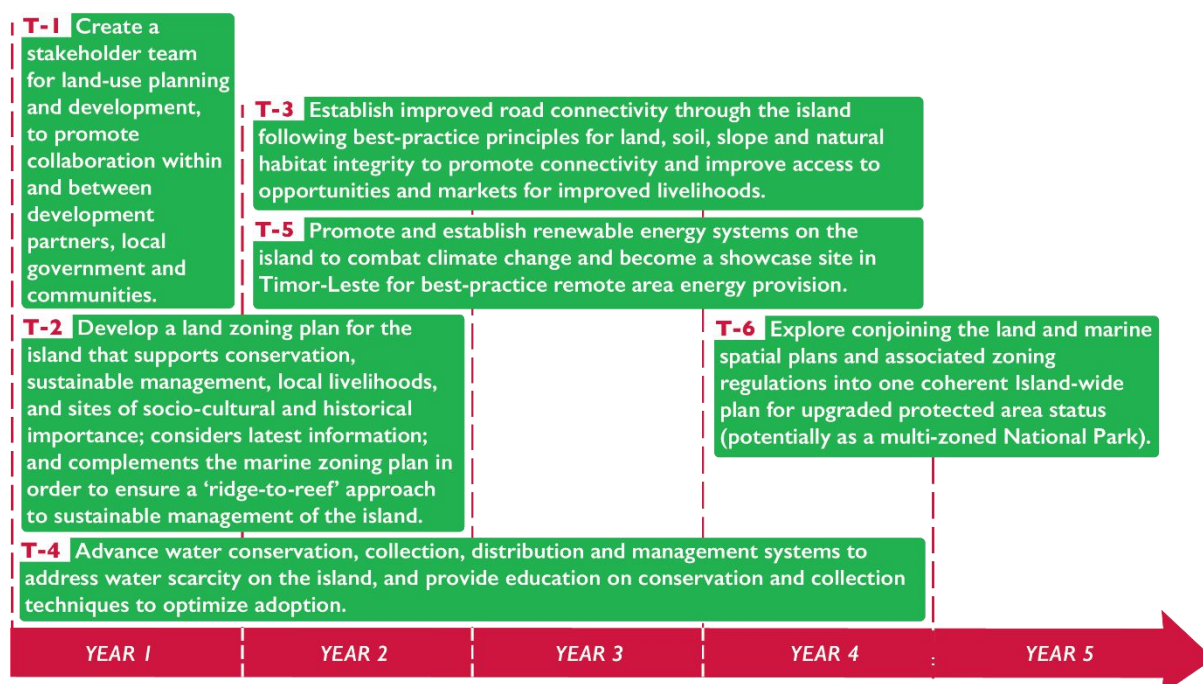


Figure 18: Broad timeline / sequence of steps for implementing draft terrestrial objectives

SOCIO-CULTURAL

Under this theme an overarching strategy was proposed through the SMP workshops to “**Strengthen Ataúrian identity while improving the livelihoods of Ataúrian people.**” The draft management objectives outlined below are also intended to link with, support, and better enable the objectives described in the previous marine and terrestrial sections. Note: these objectives are not linear in time, and many should be implemented concurrently. See figure 19 for an overview of the recommended stepwise approach for implementation.

Preliminary Draft Management Objectives		Draft Targets	Year
S-I	Support current livelihoods on Ataúro to adopt best-practice approaches to sustainability and optimize existing income generation.	Existing livelihoods are optimized for both income generation and sustainable best-practices.	1
			2
			3
			4
			5
<p>Existing livelihoods on Ataúro largely consist of raising livestock, crop farming and fishing; with smaller (but increasing) numbers of people earning livelihoods through small business enterprises (kiosks, shops) and tourism. Almost all households engage in more than one livelihood activity. Key steps to advancing sustainable best-practices within these existing industries, while at the same time optimizing income generation, include the following:</p> <ul style="list-style-type: none"> Livestock: <ul style="list-style-type: none"> ensure areas are appropriately delineated for large livestock in order to avoid damage to natural forest areas and important water courseways (as per the land-use plan, objective T-2, regarding terrestrial zoning); improve animal husbandry skills to promote healthy stock, manage disease control, and support animal welfare; promote livestock sales locally; and enhance access to markets (as per the Obj. T-3 regarding road connectivity). Crop farming: <ul style="list-style-type: none"> improve sustainable water harvesting and water storage systems; improve seed and grain storage systems; advance skills in horticulture and permaculture in line with best practice sustainability principles; promote crop sales locally; and enhance access to markets. Fishing: <ul style="list-style-type: none"> ensure compliance with marine zones delineated for restrictions in use (No-Take Zones) and restrictions in gear types (as per the marine zoning plan, objectives M-1 through M-6); promote and enable transitions to offshore fisheries where viable to further protect the reef environment and fish stocks of Ataúro; support the establishment of cool-storage facilities to reduce spoilage and optimize salability of products; promote local sales; and enhance access to markets. Tourism and associated business enterprises: <ul style="list-style-type: none"> promote community-based eco-tourism opportunities; support skills-building for local community members to have improved employment opportunities for ranging roles within the tourism sector (including training in languages, hospitality, food and beverages, business / enterprise development, infrastructure development and maintenance, and administration); explore opportunities for enabling community access to capital to promote local investment; ensure tourism enterprises target recruitment locally for Ataúrians; ensure tourism developments comply with best-practice eco-tourism principles (including sustainable water and waste management, preservation of the natural environment, and support to local communities. 			

Preliminary Draft Management Objectives		Draft Targets	Year
<p>Tourism related opportunities and best practice approaches for Ataúro are further outlined in the 'Ataúro Island Sustainable Tourism Strategy' (https://www.timorleste.tl/documents/Atauro-island-sustainable-tourism-strategy-2030), which should be implemented and adhered to. Further information on best-practice criteria for sustainable tourism can also be found at the Global Sustainable Tourism Council [GSTC] (https://www.gstcouncil.org/gstc-criteria).</p>			
S-2	<p>Promote training and educational opportunities for Ataúrians to enable the adoption of the above best-practice approaches to existing livelihood development, and optimize opportunities for alternative livelihoods that reduce destructive or extractive activities.</p>	<p>Training and educational opportunities are available and enhance existing and alternative livelihood opportunities.</p>	1
			2
			3
			4
			5
<p>Recommendations to date for promoting training and educational opportunities include:</p> <ul style="list-style-type: none"> • the establishment of a community training center / business center; • the development of training curricula tailored to address the needs of Ataúrians and promote best-practice approaches as outlined in objective S-1, as well as promote alternative livelihood skills-building (local product development and diversification); • the acquisition of vocation training support from the Secretary of State for Professional Training and Employment Policy (SEPFPOPE) related to livestock, farming, handicraft development etc.; and • the establishment of a youth internship program. <p>The above would be intended to utilize and promote both formal and informal techniques for capacity building and professional development. These training and educational opportunities should encourage and facilitate the engagement of women and young people in skills-building opportunities in order to promote gender equality and counteract youth migration from Ataúro.</p>			
S-3	<p>Protect the natural and historical heritage sites of Ataúro Island.</p>	<p>Natural and historical heritage sites are effectively preserved and protected.</p>	1
			2
			3
			4
			5
<p>This objective links with objective T-2, whereby sites of natural and historical heritage on Ataúro are identified and designated for preservation and protection through a land-use zoning plan. Such land-planning would need to be supported by proactive preservation measures and engagement of communities to manage and conserve the sites. As a part of this work, it is noted that the results of any past, present and future archaeological, historical or anthropological research conducted on Ataúro needs to be shared back with the Ataúrian community and district government in order to both protect and enhance local knowledge and preserve all relevant information on the sites.</p>			
S-4	<p>Preserve, document and promote the indigenous culture of Ataúro Island.</p>	<p>The indigenous culture of Ataúro Island is documented, promoted and preserved for future generations.</p>	1
			2
			3
			4
			5
<p>Initiatives recommended to achieve this have been identified as follows:</p> <ul style="list-style-type: none"> • trace and document the ancestral heritage of Ataúrians; • capture and document the traditional stories of Ataúro; • revive traditional Ataúrian musical instruments; • revive traditional Ataúrian practices, such as Sasik*, and the dialogue of Manroni**; • promote traditional Ataúrian art and creativity. <p>* Sasik is the ancestral practice of throwing an arrow dart to expand and determine land boundaries between neighbors. ** Manroni is one of three heritage clans on Ataúro, alongside Humungili and Adade.</p>			

Preliminary Draft Management Objectives		Draft Targets	Year
Such documentation, once collated, may be reproduced in edu-informational format for showcasing at the planned Visitors Center.			
S-5	Establish and enforce a waste management and 'Zero One-Use Plastics' (ZOUP) policy on the island.	Ataúro Island has an effective waste management system in place, and One-Use Plastics are not permitted on the island.	1
			2
			3
			4
			5
While it is recognized that the issue of plastic waste washing up onto the beaches on Ataúro is in part / largely the result of plastics arriving from neighboring regions and nations, nonetheless a ZOUP policy on the island would ensure a precedent is set for reducing any further accumulation of waste (particularly as tourism grows on the island). ZOUP would require that no single-use plastics (e.g. plastic bottles, bags, packaging) be brought onto or used on the island. In addition to this it is recommended that a local deposit, re-purposing and recycling scheme be established to enable existing and washed up plastics, as well as wider waste products, to be dealt with securely to maintain the ecological integrity of the island.			
S-6	Improve health services and facilities on Ataúro Island.	Health services and facilities are sufficient to support the well-being of Ataúrian society.	1
			2
			3
			4
			5
Research and expert guidance are required to improve the provision of medical facilities and associated services on Ataúro Island. Sustainable development principles include the health and well-being of society as an integral component of sustainable living (SDG#3). Improvements are not limited to the establishment of staffed clinics and associated pharmacies, but may also include innovative advances, such as regular specialist visitation through health roadshows and / or greater support for Ataúrians to attend Dili-based consultations where required.			
S-7	Improve information and communication technologies (ICT) facilities and service providers on Ataúro Island.	ITC provisions are accessible to all Ataúrian society	1
			2
			3
			4
			5
The improvement of ICT facilities and services will support sustainable development on several levels. Enabling access to the internet for education and information will support youth opportunities for learning as well as widen communication opportunities to mitigate against youth migration and isolation. ICT will also enable Ataúrians to more effectively market the island as a sustainable destination for tourism and manage visitor bookings and travel arrangements. Such facilities will also enable a broadening of target markets to include digital nomads and higher-end clientele who generally provide greater per capita financial contributions to society.			
S-8	Ensure community engagement with equitable gender representation in all proposed activities to advance the sustainability of Ataúro Island.	Communities with equitable gender representation are engaged and actively involved in the drive for a sustainable island.	1
			2
			3
			4
			5
Community engagement at all stages of SMP implementation needs to be fully representative of community demographics, including representation of women and young people. Community representation within the various groups proposed in this SMP is essential, including representation in the MPA management unit (Obj. M-3), land-use planning team (Obj. T-1), and potential future National Park management (Obj. T-6).			
Engaging community members will require awareness raising related to the management objectives outlined in this SMP. Such awareness raising could be implemented through a range of mechanisms, including:			

Preliminary Draft Management Objectives	Draft Targets	Year
<ul style="list-style-type: none"> the production of audio-visual materials for clear and transparent communications (with all materials provided in local languages); community events and festivals celebrating and advocating sustainability initiatives; an award scheme for communities exemplifying best-practice sustainable activities, to promote friendly inter-community competition and awareness raising (this could be a MOS competition, i.e. Matak, Organizadu no Saudavel = Green, Organized and Healthy); 		

With regards to implementing these objectives, many can be undertaken concurrently and should be continued and supported through time, as shown in the below broad timeline.



Figure 19: Broad timeline / sequence of steps for implementing draft socio-cultural objectives

Note: Objective S-4 is anticipated to take place concurrently with the land-use zoning plan. Objective S-6 is anticipated to be implemented following appropriate research, identification of options and fundraising.

All three sectors in this plan — **Marine**, **Terrestrial** and **Socio-cultural** are interlinked, with many objectives reliant on one another for effective implementation. Therefore, figure 20 (below) shows the overall broad timeline of objectives for all three sectors combined.



Figure 20: Overall SMP timeline, sectors combined.

MONITORING, EVALUATION AND LEARNING

As outlined in the introduction to this plan, the SMP is intended to complement the “Ataúro Island Sustainable Tourism Strategy”, contribute towards Timor-Leste’s national commitment to Sustainable Development Goals (SDG’s) and the various international commitments (CDB, CTI-CFF etc.), as well as align with and actualize national regulatory targets of Timor-Leste (e.g. no. 26/2012, no.33/2017, no. 5/2016, no. 5/2004 and no. 6/2004).

Ultimately however, the stakeholders for whom this SMP holds the greatest significance is the **communities and residents of Ataúro Island**; and with this in mind the plan has been developed for practicable application at the site level.

The management objectives of this plan aim to provide a “go to” reference for the Post Administrator to assess proposed projects on the island, and decide whether they will contribute effectively to the sustainable development of Ataúro. They also aim to promote collaboration and coordination amongst development partners to work together to achieve the targets outlined.

To that end, it is recommended a mid-term and end-of-term assessment be conducted over the five years of this plan, focused on the following areas.

- (a) **Status / achievement of the targets** – i.e. whether an objective is:
 - not yet started
 - in progress, or
 - has been completed / achieved.
- (b) **Development partners engaged in & supporting the work** – i.e. mapping and documenting the ways in which development partners are proactively collaborating and working together to achieve the objectives (and /or documenting mechanisms to facilitate improvements if required).
- (c) **Impact for sustainability** – i.e. what impact has been achieved through the completion of the objective.

For the latter of these (point c) the SDG principles provide a useful framework for assessment (as shown in table 4). It is recognized that any monitoring and evaluation (M&E) framework ideally tracks progress by comparing future status to baseline status. The gathering of thorough baseline data for this SMP was beyond the remit of the initiative; nonetheless, baseline comparison (BC) data does exist for some of the SDG indicators, as shown in table 4, and could be utilized in collaboration with the relevant development partners mentioned.

For the SDG indicators that do not have BC data existing / available, a perception-based (PB) qualitative evaluation may be undertaken through targeted stakeholder focus group discussions (FGDs) to assess perceived changes to these areas over time; potentially combined with a quantitative survey.

SDG	Links with SMP Objective #	BC	PB
1. Reduction of poverty	M-6, T-2, T-4, S-1, S-2, S-7		X
2. Reduction in hunger	M-6, T-2, T-4, S-1, S-2, S-7		X
3. Improvement in health and well-being	T-4, S-3, S-5, S-7		X
4. Improvement in education & skills building	M-8, S-2	X (a)	
5. Improvement in gender equality	M-3, T-1, S-1, S-7		X
6. Improvement in access to clean water and sanitation	T-4, S-2, S-7	X (b)	
7. Improved access to affordable, clean energy	S-6	X (c)	
8. Improved access to livelihoods and economic growth	S-1, S-2		X
9. Advanced innovations and infrastructure	T-2, T-3		X
10. Reduced inequalities	S-1, S-2		X
11. Sustainable communities	S-7		X
12. More responsible production and consumption	S-1, S-2, S-5, S-6		X
13. Improved action for climate change	S-6		X
14. Improved marine biodiversity and ecosystem health	M1 - 9	X (d)	
15. Improved terrestrial biodiversity and ecosystem health	T1 - 4		X
16. Peace, justice and strong institutions	M-3, T-1, S-3		X
17. Improved partnerships to achieve goals	M-3, T-1, S-7		X

Table 4: High-level SDG Indicators for SMP M&E.

BC notes:

- (a) The Post Administrator has existing baseline (2019) data related to educational levels of the population on Ataúro; and various development partners (EmprezaDiak, Roman Luan, Mercy Corps, Na Terra etc.) have data related to baseline skills and capacity building opportunities provided by partners active on the island.
- (b) The ZEESMs report outlines baseline water provisioning on Ataúro (circa 2015) and various development partners who have worked on supporting rainwater catchment, water storage and solar water panel projects (e.g. Mercy Corps, Permatil, CI etc.) have data regarding coverage of initiatives to date (2020).
- (c) The ZEESMs report outlines, to some degree, the electrification available on Ataúro (circa 2015).
- (d) Various development partners have baseline data (up to 2020) related to marine biodiversity and ecosystem health. Some metrics related to this area are presented in the situational analysis of this report, however further data is available and may be utilized depending on the willingness of the partners (namely: Coral Triangle Center, Blue Ventures, Charles Darwin University, WorldFish and Conservation International).

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Appendix One: Stakeholder Consultations

The following stakeholder consultations and workshops were conducted in the development of this plan.

(1) **On-Site Semi-Structured Interviews** (October 18 – 25, 2019)

This included interviews with representatives from NGOs / development partners active on Ataúro, and private sector representatives as follows: Conservation International, Blue Ventures, Coral Triangle Center, Charles Darwin University, WorldFish, Empreziadiak, Roman Luan, Solimar, Barry's Place guesthouse and Ataúro Dive Resort.

In addition to this, introductions were made in this time to representatives from the Ministry of Agriculture and Fisheries (MAF), department of Protected Areas, and Fisheries Agencies (Pescas), as well as district government (Post Administrator) and community leaders (Chefe Suco).

(2) **Meetings, E-Meetings and Data Gathering** (Nov 2019 – Jan 2020)

Through this period, further background information, data and perspectives about Ataúro were gathered from a range of stakeholders, including: **Government Agencies** (Post Administrator, Suco Chefes, Ministry of Agriculture and Fisheries, Ministry of Tourism Commerce and Industry, Ministry of Public Works, Ministry of Transport and Telecommunications, Secretary of State for Environment, Secretary of State for Art and Culture, Secretary State of Land Property and the office of the Special Administrative Region of Oé-Cusse Ambeno [RAEOA] and Special Zones of Social Market Economy [ZEESM]); **Development Partners and Private Sector representatives** involved in projects on Ataúro (Asosiasaun Turizmu Koleku Mahanak Ataúro, Blue Ventures, Conservation International, Coral Triangle Center, Empreziadiak, Mercy Corps, Na Terra, Permatil, Roman Luan, World Fish, European Union, UN Food and Agricultural Organization, Marine Tourism Association and PEMSEA); and a range of **individual and academic representatives** with resources about the island (Karen Edyvane, Charles Darwin University, Jenny House, Emily Morrison, Barry Hinton).

(3) Development Partners Workshop (February 25, 2020)

Held at Timor Plaza, this workshop had the following objectives:

- To introduce the SMP (concept and overall aim of the work).
- To review the SMP framework, situational analysis, and acquire any further input.
- To learn from development partners about their activities in Ataúro.
- To learn partners perceptions on key sustainability challenges and issues to address in the SMP.
- To identify preliminary sustainability targets, journey and milestones from partners perspectives.
- To explore and gather information on sustainability-related areas of work that partners support.
- To ensure partners' work is reflected appropriately in the SMP.

Participants of the workshop were as follows:

Participant Organization	Name of Participant
Asosiasaun Turizmu Koleku Mahanak Ataúro (ATKOMA)	Mario Gomes
Blue Ventures (BV)	Birgit Hermann
	Oldegar Massinga
Conservation International (CI)	Anselmo Amaral
Coral Triangle Center (CTC)	Marthen Welly
	Constancio Dos Santos
Emprezadiak	Sébastien Liégeois
	José Marques
Marine Tourism Association	Karen Edyvane
Mercy Corps	Lourença F.
	Stephen Ussey
President an Terra Na Terra	A.K. Bernot Pleme
	Rosa Maria Alves G.
Peace Corps	Noah Tsigolis
Permatil	Ego Lemos
	Armindo de Deus
PEMSEA	Mario Marques Cabral
Roman Luan (RL)	Avelino Pereira Fernandes
World Fish (WF)	Mario Pereira
	Agostinha Duarte
European Union	Simon Le Grand
FAO-TL	Raphy Favre
USAID	Flavia da Silva
Wildlife Fishery	Alda da R.

Invited but absent: Marselina de Araujo Balamba (ATKOMA), Manuel Mendes (CI), Maria Amando (JICA), Leopoldo Leite (KOICA), Margaret McLoughlin (Mercy Corps), Fernando Madiera (NaTerra), Leo Belarmino (NaTerra), Fernando de Deus (Permatil), Marcelo Soares Belo (Roman Luan), David Mills (WordFish).

This workshop, and the following 'Government Sustainability Team Workshop' were organized and facilitated by USAID's Tourism For All Project (Peter Semone, Inacia Dos Santos, Antonio Gusmao and Shinsuke Nakamura), Sustainable Solutions International Consulting (Eleanor Carter) with interpretation support from Sarmiento Wargas.

(4) Government Sustainability Team Workshop (February 28, 2020)

Held at Timor Plaza, this workshop had the following objectives:

- To introduce the SMP (concept and overall aim of the work).
- To review the SMP situational analysis and acquire any further input for consideration.
- To review the SMP framework.
- To articulate the SMP vision.
- To identify (and review) the key sustainability challenges to be addressed, and identify preliminary sustainability targets, journey, roles and milestones.
- To identify opportunities for further consideration / recognition in the plan.
- To review the process steps planned.

Participants of the workshop were as follows:

Agency/ Department	Name and Role
Ministry of State Administration	Emiliana Soares (representative of Director General Decentralization of Local Administration)
	Mateus Belo (Administrator of Post Administrative of Ataúro)
	Francisco da Costa
Ministry of Agriculture and Fisheries	Lino de Jesus Martins (representative of Director General of Fishery)
	João Antalmo, National Director for Nature Conservation
	Pedro Pinto, Head of Protected Areas
	Celestino da C.B
	Fidel de Castro
Ministry of Tourism Commerce and Industry	Benvindo Santos
	Ayako Shimizu
Ministry of Public Works	Luis I. S. Doutel
	Rui Hernani Freitas Guterres, Director General of Public Works
Ministry of Transport and Telecommunications	Lino Barreto, National Director Maritime Transport,
	Helder Silva
Secretary of State for Environment	Martinho de Araujo (representative of Director General of Environment)
Secretary of State for Art and Culture	Jacinto da Silva (representative of Director General of Art and Culture)
	Gil Paulino S. Oliveira
RAEOA-ZEEMS TL	Anselmo V. X
	Agostinho Caetano
	Domingas Amaral
	(representatives of President of RAEOA-ZEEMS TIL)
USAID	Flavia da Silva

Invited but absent: Amandio Paulino Gastão do Rosario Sousa, General Director Decentralization of Local Administration, (Ministry of State Administration); Gaspar Soares, President of Dili Municipality (Ministry of State Administration); Acacio Guterres, General Director of Fishery (Ministry of Agriculture and Fisheries); João Carlos, General Director of Environment (Secretary of State for Environment); Manuel Smith, General Director of Art and Culture (Secretary of State for Art and Culture);Rodrigo Mendonça, General Director of Land Property (Secretary of State of Land Property); José Luis Guterres, President of RAEOA-ZEEMS TL.

(5) Informal Follow-up E-Meetings with Key Stakeholders (Mar – May, 2020)

In this period, the planned community consultations were delayed due to the outbreak of the Covid-19 pandemic. Therefore the SMP was developed as far as possible through informal e-communications with key stakeholders, particularly key development partners.

(6) Community Consultations (July 2020)

The objectives of the community consultations were:

- To raise awareness about the SMP and promote engagement.
- To review, discuss and build upon the draft SMP, including gaining agreement on the key sustainability challenges and plans to address those challenges.
- To share the development partner profiles and associated information for transparency, awareness raising and information sharing.
- To get buy-in and support for the SMP from the communities and suco leaders.

The consultations were undertaken with participants from the following communities, with appropriate gender and youth representation in each meeting.

- 14 July: Suco Biqueli (with community representatives from Aldeia Ilicnamu, Ilihua, Pala and Uaro-Ana). 22 participants (13 M, 9 F).
- 16 July: Suco Maquili with community representatives from Aldeia Fatulela, Macelihi, Maulaca and Maumeta). 20 participants (12 M, 8 F).
- 17 July: Suco Macadade with community representatives from Aldeia Anartuto, Berao and Bite). 23 participants (17 M, 6 F).
- 18 July: Suco Beloi with community representatives from Aldeia Adara, Arlo, Maquer and Usu-Bemasu). 20 participants (12 M, 8 F).

Total Participant from 4 sucos: 85 (54 M, 31 F). Communities unavailable for consultation: Suco Vila Maumeta (Aldeia Eclae, Ilimanu and Ileticaraqia) and Aldeia Iltimur from Suco Macadade.

Appendix Two: Protected Aquatic Species in Timor-Leste

List of all legally protected aquatic species in Timor-Leste (extracted from the Joint Ministerial Diploma no. 18/2017 on Protected Aquatic Species).

AQUATIC ANIMAL	LATIN	NAMES		STATUS
		LOCAL	PORTUGUESE	
1 Maori wrasse	<i>Cheilinus Undulatus</i>	Niru baliun	Bodião napoleão	Threatened
2 Dolphin ⁽¹⁾	<i>Delphinidae</i>	Toninho	Golfinho	Threatened
3 Whales (All Species)	<i>Balaenidae</i>	Baleia	Baleia, Cachalote, Baleote	Threatened
4 Sea turtles (All Species)	<i>Chelonioidea</i>	Lenuk Tasi	Tartaruga	Threatened
5 Corals (All Species)	<i>Anthozoa</i>	Ahu Ruin (funan no isin) / Ai-metan Tasi / Esponja	Coral	Threatened
6 Dugong (All Species)	<i>Dugong dugong</i>	Duju/Karau-Tasi	Dugongo	Threatened
7 Pearl oyster ⁽²⁾	<i>Pinctada maxima</i>	Sipu mutiara	Ostra perlifera	Threatened
8 Giant Clam	<i>Tridacna gigas</i>	Sipu kima	Ostra gigante	Threatened
9 Small Giant Clam	<i>Tridacna maxima</i>	Sipu bo'ot	Ameijoa gigante	Threatened
10 Horse hof	<i>Hippopus Hippopus</i>	Sipu Kuda Ain-Fatin	Ameijoa gigante	Threatened
11 Scaly Clam	<i>Tridacna squamosa</i>	Sipu Tarak	Ameijoa gigante de escamas	Threatened
12 Southern Giant Clam	<i>Tridacna derasa</i>	Sipu Sul	Ameijoa gigante do sul	Threatened
13 Saffron- Colored Giant Clam	<i>Tridacna crocoa</i>	Sipu Asafraun/kinur	Ameijoa gigante cor de açafrao	Threatened
14 Sawfish	<i>Pristis microdon</i>	Tubaraun Kadó	Tubarão serra	Critically Endangered
15 Porbeagle Shark	<i>Lamna nasus</i>	Tubaraun Makikit	Tubarão águia	Threatened
16 Great White Shark	<i>Carcharodon Carcharias</i>	Tubaraun Mutin	Tubarão branco	Threatened
17 Oceanic White tip Shark	<i>Carcharinus Longimanus</i>	Tubaraun Koboy	Galha-branca- oceânico	Threatened
18 Scalloped Hammerhead Shark	<i>Sphyrna lewini</i>	n/a	Tubarão martelo	Threatened
19 Great Hammerhead Shark	<i>Sphyrna mokarran</i>	n/a	Tubarão martelo	Threatened
20 Smooth Hammerhead Shark	<i>Sphyrna zygaena</i>	n/a	Tubarão martelo	Threatened
21 Whale shark	<i>Rhincodon typus</i>	n/a	Tubarão baleia	Threatened
22 Breaching Shark	<i>Cetorhinus maximus</i>	n/a	Tubarão fera	Threatened
23 Pelagic Thresher	<i>Alopias pelagicus</i>	n/a	Tubarão Espada	Threatened
24 Shark		n/a	n/a	Unknown
25 Bigeye Thresher	<i>Alopias superciliosus</i>	n/a	n/a	Threatened
26 Common Thresher	<i>Alopias vulpinus</i>	n/a	n/a	Threatened
27 Giant Manta Ray	<i>Manta birostris</i>	Pari bo'ot tasi Klean	Raia Mantal/ Jamanta gigante	Threatened
28 Manta Ray (Alfredi)	<i>Manta alfredi</i>	Pari bo'ot tasi badak	Manta/Jamanta Principe Alfred	Threatened
29 Spotted Eagle Ray	<i>Aetobatus narinari</i>	Pari makerek	Ratão pintado	Threatened

1) All Species except for authorized recreational activities.

2) Except pearl oysters from authorized commercial holdings.

Appendix Three: Exemplar Tara Bandu Suco Regulation

The following text is standard across all Suco Regulations for the existing *Tara Bandu* sites (Marine Managed Areas) on Ataúro Island. This exemplar has been extracted from the Suco Regulation for *Tara Bandu* Bequeli / Ilidua.

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OBJECTIVES

The objectives of the *Tara Bandu* and Suco regulation are as follows:

- a. Look after the natural resources as an heritage from our ancestors;
- b. Protect the natural resources that contribute to peoples lives guaranteeing equality and sustainable use of the resources;
- c. Protect the natural resources to guarantee that the new generations will have an opportunity to have a good life with a strong connection to nature;
- d. Protect the natural resources to guarantee that the new generations will learn from our work as a moral duty with a spiritual importance as key to conservation and management of natural resources;
- e. Maintain the level and the conditions of the natural resources (area, volume, quantity) as an ecologic infrastructure that supports the people of the Bequeli Suco as well as a State asset;
- f. Maintain the function of regulator of rain water and guarantee the hydrologic process in the hydrographic basin, water ways no river that serve as water supply;
- g. Maintain the function of avoiding erosion that comes from destroying the vegetation a agricultural practices that destroy the natural resources;
- h. Maintain the trees that are important as a source of food and traditional medication that we use today and the one we may discover in the future that can improve the health of the people;
- i. Maintain the beautiful landscape
- j. Attract visitors and possible income sources from people that enjoy the landscape and the natural beauty of Bequeli (through sustainable tourism that improves and diversifies people's lives and source of income);
- k. To attract possible investors, specially firms with small funds for sustainable and responsible development to improve peoples lives.

GENERAL DEFINITIONS

Community, refers to a household or family members in one house within the Suco

Natural resources, refers to a land, sea and its resources within the Suco

Tarabandu, is a traditional custom that forbids an activity or behavior of the community that as the potential to damage natural resources and can impact the community negatively.

Suco Council, a small body that exists in the suco formed by members that represent the villages and community groups of women and men to implement and monitoring the suco regulation.

Suco regulation, A written document about the rules governing the suco area with its resources in land areas and in the sea to ensure its use of for the next generation.

Protected areas, refers to a place on land or sea that fulfills the biologic criteria as a place for animals and plants that are protected by formal law to live

No take zone, areas that following a discussion with the community leaders are decided to stop human activity to improve the biological value of that area. The no take zone has limited access following the rules of the universe and its accepted on the suco regulation.

Buffer zone, is the área that surrounds the no take zone that has the function of support to the no take zone. The buffer zone has limited access following the rules of the universe and its accepted on the suco regulation

Sacred place, areas that spiritual leaders or individuals show to the community leaders and relevant authorities to register as a sacred place in the central registration as a sacred place managed by the government.

Theft is the process in which a person or group takes natural resources that don't belong to them through a process of: hiding activities, motive and reason from the community and not providing information about the intention to take the resources from local government, traditional structure (Adat and Na'in), formal structures (District Department) and the Central Government.

Grabbing is a process which a person or group stops the links of others to a special place through destruction, theft and to stop the right to enter the place through different ways as: threats (physical), psychological pressure and making people give money as compensation.

Take, is a process that a person or a group takes more natural resources than the ones it's authorized to take. As an example when they take more that approved by the local department or authority.

Damage, is a process that a person or a group conduct that reduce the area, volume, the quantity and quality of a resource or landscape and its contribution to the community.

SANCTIONS

General behavior

The suspect has to comply with the Suco regulation and Laws in force in Timor-Leste and as to follow the penal code to apply the sanctions;

According to the penal Code Article 215 Any person who, failing to comply with legal or regulatory provisions intended to protect the environment, directly or indirectly seriously harms the equilibrium of natural ecosystems, is punishable with up to 3 years imprisonment or a fine.

The suspect in flagrante delicto if remorseful (remorse, Article 28) can go through discussions with the police, the authorities, seeking to find ways to ensure social harmony of the Suco according to the contributions a collective effort of the community to improve the wealth or an area that was object to theft, grabbing take-or damage.

If there is a consensus, the sanction for cases of contribution in goods and services that facilitate the work of the community to restore and repair the natural resources according to the process of " *Maun Alin* " or work together.

Before the systems " *Maun Alin* " the person has to make a public statement to the community that participates in the process of " *Maun Alin*" making clear 1) what he has done, 2) accept the guilt, and that 3) he wants to ask for the forgiveness of the community 4) through social work activities. 5) and he will not do it again. This follows the Article 83 of the Penal Code.

If the person has no possibility to contribute in goods to the *Maun Alin* the guilty person can pay with work and community service to fix, do the maintenance or clean public spaces in the Suco or infrastructures that are important for the life of the community (school, health clinic). This follows Article 78 of the Penal Code.

Sanction of specific behavior

Crime against Flora and Fauna

Crimes against Fauna and Flora. Crimes against Fauna is the killing of wild forest animals like meda, dear, monkey, bats, birds and others and the killing of wild sea animals which are protected by national law. Crimes against Flora are the cutting of a tree, taking the seeds and seedlings of a protected species protected through the Forestry Policy and the laws at the national level.

Suco Councils will recommend and help the Court to carry out sanctions in accordance with Article 217 to 220. Article 217 refers sanctions for destruction of animals and vegetation, Article 218 On protected and threatened species and 219 on fisheries using explosives or toxic substances or other bad practices to the sea.

Crime of burning

The Suco Council will recommend and help the Court to carry out sanctions under article 221 and will follow what's written in General Sanctions for each case.

Crime of hindering or disturbing a ritual ceremony

Suco Councils will recommend and help the Court to carry out sanctions under article 222 and will follow what's written in General Sanctions for each case.

Crime of not respecting a no take zone

Suco Councils will recommend and help the Court to carry out sanctions on General Sanctions for each case, such as entry into prohibited zone, taking goods in the no take zone, breaking into the prohibition zone.

Crime of profaning a sacred place

Suco Councils will recommend and help the Court to carry out sanctions under article 223 and will follow what's written in General Sanctions for each case.

Crime of gambling

Gambling brings problems into the community and those who lose often held several activities to find money to pay back their debt. The majority of people hold activities that damage the environment to find money to pay the debts. The Suco Council applies the prohibition will recommend and help the Court to carry out sanctions in accordance with Article 322

Crime of violence against people and property

The Suco Council will report to the police all activities involving violence (domestic or in the public domain), which resulted in damage to the community or/and a victim. The Suco Council shall apply the prohibition and will recommend and help the Court to carry out sanctions in accordance with Article 260

Reporting Sanctions

The Suco Council is mandated to report and bring the matter to the level of Administrative Post, Municipal level and relevant government agencies to be aware of the problem caused at the local level;

SUCO REGULATION ON THE USE OF MARITIME RESOURCES

Bequeli Suco Council members, Administrative Post of Ataúro, Municipal Authorities of Dili, through discussions with communities using maritime and coastal resources as a source of food and income decided to write this regulation.

The regulation is a guideline to follow on the planning of maritime and coastal areas in the Bequeli Suco. Bequeli Suco Council School follows the roles of the Suco Council.

ARTICLE I - GENERAL PRINCIPLES

I. COORDINATION

- a) Suco Council believes that the coordination and better communication between Suco Council with possible partners in natural resources management is important to avoid duplication and to reduce conflict within the community
- b) Suco Council is willing to work with all the Institutions, private and public – which have the will to 1) protect natural resources and 2) strengthen communities living inside the Suco;
- c) Suco Council is pleased to work with the private sector, projects or programs from various development partners since the partners coordinate activities with administrative structures at the suco, Municipal and National level, and presented documentation which show that the State accepts the institutions/programs/projects as partners with the opportunity to work in Timor-Leste

2. PARTICIPATION, TRANSPARENCY, RESPONSABILITY

- a) Suco Council believes that community participation is indispensable in the planning, decision-making and implementation of acts or activities of the community and its links with natural resources.
- b) Suco Council believes that every process in the process of administrative management of the Bequeli Suco, especially the procedures linked to the decision-making processes about natural resources, shall be open to all community members to understand and give opinion to the referred Suco Council.

3. INTERGENERATION EQUITY AND EQUALITY

- a) Suco Council believes that everyone, men and women and children with a disability or not, is entitled to use and participate in the development process of the Suco;
- b) The resources that we use is the result of the relation of our ancestors with the nature, of their beliefs and practices for the nature that allows us to live in peace today;
- c) Suco Council believes that this generation has the same right to use the natural resources as the previous and the future generation

Suco Council believes that all generations (this one and future ones) have the duty and responsibility to care for the environment;

ARTICLE 2 - GENERAL OBJECTIVES

- Rational management model and sustainable use of maritime and coastal natural resources in Bequeli. The model ensures and guarantees that the community members of Bequeli Suco have a long term benefit of the management;
- Conservation, preservation and rehabilitation of marine habitat in Bequeli Suco to maintain the productivity and sustainability of fisheries practices in the Suco
- Conservation of sea animals, which are prohibited by national and international;

ARTICLE 3 - SPECIFIC OBJECTIVES

- 1) Increase reef fish size, numbers and diversity, protect important habitats and places and ensure food security;
- 2) Work with General Directorate of Fisheries to monitor and record catches in Bequeli Suco;

- 3) Reduce or eradicate threats from destructive fishing, illegal fishing and marine development, and promote sustainable development in the fishing and tourism sector in Bequeli Suco;
- 4) Create suco regulation in accordance to Timorese national law for the sustainable management of coastal and marine resources;
- 5) Reflect on climate change and protect the Suco's natural and social resources from related new threats;
- 6) Deliver conservation, restoration and rehabilitation of habitats such as mangroves and sea grass, ensuring fishery productivity;
- 7) Deliver protection of species threatened at international level, forbidden according to national law.;

ARTICLE 4 - MANAGEMENT APPROACH

Partnership and co-management

- Work with General Directorate for Fisheries and other partners towards raising awareness of national fisheries law and include key points in Suco regulations;
- Work with General Directorate for Fisheries and other partners to establish committees or co-management groups in Bequeli Suco
- Work with General Directorate for Fisheries and other partners to give training and find ways to support and incentivize activities of the Suco co-management group to strengthen the management of marine and coastal resources
- Allows co-management groups to deliver monitoring of resources and habitats and protected animals according to the national law and the Suco regulations;

ARTICLE 5 - GENERAL RULE FOR ACCESS TO RESOURCES

Everyone has the right to equal access to natural resources. Despite this, everyone shall be subject to national law and to local guidelines (Suco regulations) that the Suco, together with the communities, established to protect the resources.

In the Suco, Suco Council brings the aspiration of the community to decide and prepare the guide that shows clearly according to the mar that Suco Bequeli has an the area that was chosen to have restrictions on access and use of marine resources.

ARTICLE 6 - LOCAL MARITIME PLANNING IN BIQUELI

The Suco Council of Bequeli, together with the fishermen and the community decided:

- 1) No take zone or core zone that is permanently closed for fisheries
- 2) Buffer zone or other place as a barrier to give protection to the no take zone. The buffer zone is open to some activities for some time with the consensus of the community
- 3) Temporary closure zone is an area of temporary closure that opens to access with the consensus of the community
- 4) Artisanal Fishing Zone is an area surrounding the core or buffer zone that opens to fishing activities witch utilization follows the formal law of the country

ARTICLE 7 - RULES FOR EACH ZONE

RULES FOR THE NO TAKE OR CORE ZONE

- 1) All fishing activities are forbidden to fish or collect maritime or coastal animals;
- 2) No anchoring

- 3) No access for motor boats (including motor tempel, speed boat and Jet sky) as they disturb wildlife
- 4) Exceptions are allowed in case of emergency, rough seas provided fishermen justify this to the Suco; In such cases:
 - a. Boat can cross but can't anchor or fish
 - b. Monitoring and snorkel/diving for bio-ecological monitoring by the Community Conservation Group (GKK) but cannot spearfish;
 - c. Tourism activities; diving, snorkeling and scientific fishing can happen after informing to the Suco and to coordinate together with the members of GKK of the Suco

RULES FOR THE BUFFER ZONE

- 1) The use of nets is forbidden as it would prevent the movement of fish to zone A
- 2) Use of big lures
- 3) Possible to anchor
- 4) Possible to dive and spearfish for big fish
- 5) Can do some fishing with semi-traditional fishing techniques for a specific time according with discussions with the Suco Council and the Co management Committee

RULES FOR THE TEMPORARY CLOSURE ZONE

Zona C is a zone in witch is forbidden to catch sea cucumber, shells (batu lola) in order for them to thrive for it to be open another year so that the community can catch sea cucumber, shells (batu lola) according with the measurements to guarantee the sustainability of this practice;

- Forbidden to catch sea cucumbers and shells during the closure period
- Allowed the fishing of fish during the full year

RULES TO OPEN TEMPORARY CLOSURE ZONES

The Suco Council together with the community can open Temporary Closure Zones for the community to go in to catch the species temporarily forbidden as sea cucumbers, shells and others according to the decision of the Suco informing:

- General Directorate of Fisheries
- Scientist or Independent Observer
- Committee for the Management of Protected Maritime Area (KJAMP) of Suco Bequeli

ARTICLE 8 - SANCTIONS AND ALTERNATIVE JUSTICE TO PAIN THE COMPENSATION

Suco Council, together with the community will analyze the sanction process to guarantee that the sanction in the annex to this document are approved by National Fisheries with information to the Police and Dili Municipal Court;

The Suco Council together with the community will follow the penal code and use:

Public warning (public declaration of guilt and promise not to repeat)

Community service (more that 240 hours per each infraction).

An alternative way to compensate for the damages (give back to the community what was taken or damaged and to pay a fine to the community according to what was done, can be seen in the annexes.

Annex I: Sanctions for crimes relating to fishing activities in the no take/core zone

Individuals or groups that enter the No Take/Core zone to do fishing activities will be fined according to the following:

- Fishing with rod, nets or spearfishing will be fined with \$ 100 to \$ 500
- Individuals or groups that enter the No Take/ Core zone or outside zones that belong to Beloi to fish, using compressor, explosives or toxic substances will be punished with a fine of \$ 500 to \$ 1000 and apprehension of the materials used for that activity
- Individuals or groups that catch or kill protected species like: turtle and ikan niru baliun, will be fined with \$ 100 to \$ 500
- Individuals or groups that damage the maritime ecosystem like cutting mangroves, dropping anchor in the corals and seaweed will be fined with \$ 100 to \$ 200
- Individuals or groups that do activities that can damage the maritime environment as: disposing oil, throwing plastic in the sea and leave their nets attached to the coral will be fined with \$ 100 to \$ 500
- The process to pay fines will be applied when the Suco Council evaluates to measures and stop the actions

Annex 2 : Activities that can take place on the No Take Zone and Buffer Zone

- Diving or snorkeling tourism (Core or Buffer Zone)
- Recreational Fishing (Buffer Zone)
- Scientific Fishing (Core or Buffer Zone)
- Coastal Tourism (Core or Buffer Zone)

The activities related to annex 2 will be paid with a fee already defined as a contribution of an individual or group to support the program of sustainable development of the environment and management of maritime and coastal resources in the Suco.

- ❖ Collection duties are defined in a table on annex 2 that was approved by the Head of Suco with information given to the Administrator of the Administrative Post of Ataúro
- ❖ All the income should be deposited with the co management cash box according to the existent rules.

Annex 3: Map of the No Take Zone

[Specific to each Tara Bandu. Not included in this Appendix]

Appendix Four: Commercially important reef fish in Ataúro

The below table of commercially important reef fish was developed for Ataúro Island by the Coral Triangle Center (CTC) (see: Welly et al., 2017).

Family	Species	Trophic group	Family	Species	Trophic group
Acanthuridae	<i>Acanthurus auranticavus</i>	Herbivorous	Scarini	<i>Cetoscarus bicolor</i>	Herbivorous
	<i>Acanthurus fowleri</i>	Herbivorous		<i>Chlorurus bleekeri</i>	Herbivorous
	<i>Acanthurus lineatus</i>	Herbivorous		<i>Chlorurus japanensis</i>	Herbivorous
	<i>Acanthurus mata</i>	Planktivorous		<i>Chlorurus microrhinos</i>	Herbivorous
	<i>Acanthurus nigricans</i>	Herbivorous		<i>Chlorurus sordidus</i>	Herbivorous
	<i>Acanthurus nigrofuscus</i>	Herbivorous		<i>Hipposcarus longiceps</i>	Herbivorous
	<i>Acanthurus olivaceus</i>	Herbivorous		<i>Scarus dimidiatus</i>	Herbivorous
	<i>Acanthurus pyroferus</i>	Herbivorous		<i>Scarus forsteni</i>	Herbivorous
	<i>Acanthurus thompsoni</i>	Planktivorous		<i>Scarus ghobban</i>	Herbivorous
	<i>Ctenochaetus striatus</i>	Herbivorous		<i>Scarus niger</i>	Herbivorous
	<i>Naso annulatus</i>	Planktivorous		<i>Scarus prasiognathus</i>	Herbivorous
	<i>Naso hexacanthus</i>	Planktivorous		<i>Scarus rubroviolaceus</i>	Herbivorous
	<i>Naso lituratus</i>	Herbivorous		<i>Scarus schlegeli</i>	Herbivorous
	<i>Naso thynnoides</i>	Planktivorous		<i>Scarus spinus</i>	Herbivorous
	<i>Naso tonganus</i>	Herbivorous		<i>Scarus tricolor</i>	Herbivorous
	<i>Naso unicornis</i>	Herbivorous		Scombridae	<i>Gymnosarda unicolor</i>
<i>Naso vlamingii</i>	Planktivorous	<i>Rastrelliger kanagurta</i>	Planktivorous		
<i>Zebbrasoma scopas</i>	Herbivorous	<i>Scomberomorus commerson</i>	Piscivorous		
Carangidae	<i>Caranx melampygus</i>	Piscivorous	Serranidae	<i>Cephalopholis argus</i>	Piscivorous
	<i>Elagatis bipinnulatus</i>	Piscivorous		<i>Cephalopholis leopardus</i>	Piscivorous
Haemulidae	<i>Plectorhinchus chaetodontoides</i>	Carnivorous		<i>Cephalopholis miniata</i>	Piscivorous
	<i>Plectorhinchus chrysotaenia</i>	Carnivorous		<i>Cephalopholis sexmaculata</i>	Piscivorous
	<i>Plectorhinchus lessonii</i>	Carnivorous		<i>Cephalopholis urodeta</i>	Piscivorous
	<i>Plectorhinchus lineatus</i>	Carnivorous		<i>Epinephelus fasciatus</i>	Piscivorous
	<i>Plectorhinchus vittatus</i>	Carnivorous		<i>Epinephelus merra</i>	Piscivorous
Labridae	<i>Cheilinus undulatus</i>	Carnivorous		<i>Gracila albomarginata</i>	Piscivorous
Luthanidae	<i>Aphareus furca</i>	Piscivorous		<i>Variola louti</i>	Piscivorous
	<i>Aprion virescens</i>	Piscivorous		Siganidae	<i>Siganus lineatus</i>
	<i>Lutjanus bohar</i>	Piscivorous	<i>Siganus vulpinus</i>		Herbivorous
	<i>Lutjanus decussatus</i>	Piscivorous	Sphyreanidae	<i>Sphyraena barracuda</i>	Piscivorous
	<i>Lutjanus ehrenbergii</i>	Carnivorous	Lethrinidae	<i>Gnathodentex aurolineatus</i>	Carnivorous
	<i>Lutjanus fulvus</i>	Carnivorous		<i>Lethrinus erythropterus</i>	Carnivorous
	<i>Lutjanus gibbus</i>	Carnivorous		<i>Lethrinus harak</i>	Carnivorous
	<i>Lutjanus kasmira</i>	Carnivorous		<i>Lethrinus ornatus</i>	Carnivorous
	<i>Lutjanus monostigma</i>	Piscivorous		<i>Monotaxis grandoculis</i>	Carnivorous
	<i>Macolor macularis</i>	Planktivorous			
<i>Macolor niger</i>	Planktivorous				

Appendix Five: Portfolio of Development Partners on Ataúro Island

The following pages are extracted from the standalone portfolio document, available in full at: <https://bit.ly/2VNR4CI> with a Tetun language version available at: <https://bit.ly/3cBpttj>.

Development Partners Active on Ataúro Island

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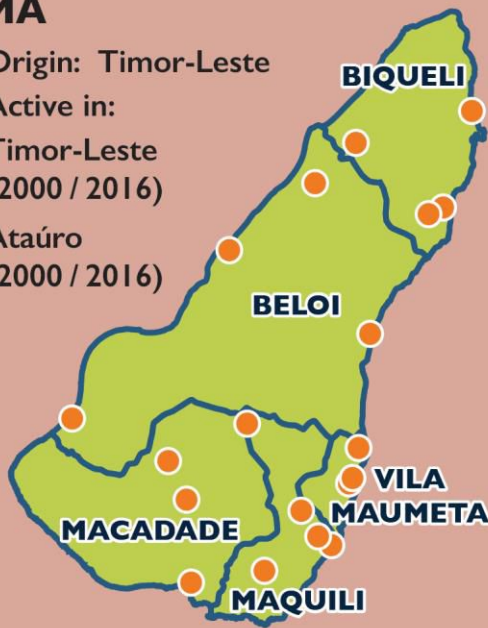
Focus areas of work for development partners are identified as follows:



ATKOMA



Origin: Timor-Leste
 Active in:
 Timor-Leste
 (2000 / 2016)
 Ataúro
 (2000 / 2016)



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Originally developed under the auspices of Grupo Turizmu Ataúro (GTA), with support from New Zealand Aid, a website promoting tourism on Ataúro was successfully developed; however the group itself did not continue.

Re-galvanized into an Association in 2016, the group began the process of acquiring legal registration under the Ministry of Justice. With support from the USAID Tourism For All Project this registration was successfully achieved in March 2019 and was recognized as a great accomplishment after more than 15 years of effort.



Ataúro Vision Statement

Promoting tourism to improve the local economy of Ataúro through strong guidelines that defend the principles of ethical tourism, strengthen the solidarity and unity of members, and improve the quality of local products.

The core drivers of ATKOMA are:

- To provide strong guidelines to promote and defend the principles of ethical ecotourism on Ataúro.
- To promote tourism as an industry to improve the local economy.
- To strengthen members of ATKOMA to create unity and solidarity.
- To promote and improve the qualities of local production.

Since its formal registration, ATKOMA has worked with the USAID Tourism For All Project in the development of an island-wide tourism strategy and action plan that feeds into activities of the association. ATKOMA members continue to support the implementation of programs including socialization of its strategies and priorities.

The association has also been introduced to different start-up models and revenue-generating options to ensure funds are available to implement activities; and to ensure conditions exist to make ATKOMA a successful Destination Management and Marketing Organization on the island.

BLUE VENTURES



Origin: United Kingdom

Active in:

Timor-Leste (2015)

Ataúro (2016)



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blue ventures
beyond conservation

Ataúro Vision Statement

Empowering coastal communities to manage their local coastal ecosystems in a way that enriches livelihoods and sustains healthy marine environments for generations to come.

Support to these homestays is on-going, with BV also providing a regular source of paying guests through its eco-volun-tourism initiative (see below). These homestay businesses are effectively providing alternative livelihoods for fisher families, and reduce fishing pressure on the reefs, which in turn increases biodiversity and boosts fish stocks. They also promote direct community engagement in the emerging tourism market and provide exemplar models for wider replication across the country.

Visitors through the BV program also support emerging tourism operators to trial, test and develop robust tourism products, including guided walks, seaweed food products, and associated goods and services.

Blue Ventures (BV) is a science-led marine conservation organisation that develops transformative approaches for nurturing and sustaining locally led marine conservation. BV works in partnership with coastal communities in places where the ocean is vital to the culture and economy; promoting models to demonstrate that effective marine and coastal management improves food security and makes economic sense.

On Ataúro Island, BV's work focuses on three key areas:

Building local capacity to monitor and manage marine resources: BV works with community groups to develop increased awareness and understanding of marine ecological systems, and provide capacity building for systematic community-led data collection and monitoring activities. This includes: fisheries monitoring (led by women groups, data is collected on fishery landings, e.g. what is caught, where it is caught, how much is caught). and seagrass monitoring (to assess long-term changes and promote greater understanding of the linkages between critical marine habitats). BV also engages local staff to support higher-level scientific surveying activities (see below).

Developing alternative livelihood opportunities to promote economic development and reduce pressure on marine resources: Since 2016, BV has been supporting and facilitating the establishment of homestays in Beloi; providing training in hospitality and guest management, food preparation (quality and safety) and business management. Eight families now operate homestays and have gone on to formally register as the Ataúro Homestay Association.

Promoting eco-volun-tourism to support local livelihoods and provide human resources for collaborative scientific monitoring: Through the BV global program, eco-volun-tourists visit Ataúro on a rolling basis, for an average six-week expedition experience. They spend part of their time in the homestays mentioned above. Their experience involves three weeks of intensive training in reef ecology and monitoring, after which they are tested. If successful, visitors go on to support scuba-based scientific reef monitoring activities at ten sites around the island (mostly *Tara Bandu*), to gather higher-level data on reef health, fish biomass and abundance over time. This data is routinely shared back to the communities, and reported to the Ministry of Agriculture and Fisheries (MAF) and the Secretary of State for the Environment.

Visitors also support cetacean surveying (the results of which are being utilized to explore and develop potential community-led cetacean watching tourism businesses) and regular marine debris assessments (that contribute to a wider regional database for analysis – the Australia Marine Debris Database).

These three streams of BV's work on Ataúro are interconnected, and are ultimately aimed to support healthy reefs and associated habitats for improved fisheries and tourism potential, in order to strengthen long-term economic benefits and food security for the people of Ataúro.

CONSERVATION INTERNATIONAL



Origin: U.S.A.



Active in:

Timor-Leste (2009)

Ataúro (2012)



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Ataúro Vision Statement

Supporting the communities of Ataúro Island to manage their natural resources through long-term, science-based sustainable-use planning to ensure food security, livelihood development, and biodiversity protection.

Conservation International (CI) works in partnership with the government of Timor-Leste, and communities and stakeholders of Ataúro Island on long-term natural resource management planning to support sustainable and economic development, food security and biodiversity protection.

CI undertook a marine reef survey in 2012 which identified Ataúro as a potential key biodiversity area. In 2015, funded by the regional government body of *Zonas Especiais de Economia Social de Mercado*, CI completed a terrestrial survey resulting in at least 4 new species and several new records. In early 2016, CI funded a reef survey that revealed the highest average fish count in the world, up to six new reef fish species, and at least one new coral species. These results led to Asia Development Bank (ADB) support through GEF funding to replicate co-management work by CI in *Nino Konis Santana National Park (NKS)*. Using this NKS model, CI supported the government and communities on Ataúro with: (1) A Seascape Plan – including Ataúro Island. (2) The establishment of 13 community-governed Marine Managed Areas (MMAs) (designated by local *Tara Bandu* and supported by detailed Suco regulations), closed to extractive activities and with buffer zones for limited sustainable local fishing activities. Tourists diving or snorkeling in these areas are expected to pay a fee to the relevant Suco / community to support site management.* (3) Fisheries Management Plans – in partnership with WorldFish (in Vila, Uaroana and Adara communities), and the deployment of fishing technologies (Fish Aggregating Devices) in four communities (Usubemaço, Uaroana, Biqueli and Adara).

* The system for fee collection and dispersal is under development.

° The zoning system for the proposed national park includes seven zone categories from Zone (Z) 1 (high conservation value) to Z 5 (low conservation value). Marine environment zones include: a deep water-cetacean corridor (Z4), benthic habitat outside of MMAs (Z7), benthic habitat inside MMAs (Z1&3); covering a total area of 39,491 ha. Terrestrial environment zones include: important forest water sources (Z2), significant caves (Chiroptera and Collocalia habitat, Z7), protected forests (Z1),

Building on this work, CI drafted a zoning plan° (marine and terrestrial) for submission to establish Ataúro Island as a National Park (applying zoning criteria developed by CI for the NKS).

In late 2016, Swire Shipping and the MACF funded CI to undertake a five-day regional cetacean survey, with sightings of 11 species in 25 pods, totalling over 2,000 individuals, with two new records for Timor-Leste. Many of the pods were of mixed species, numbering >500 individuals ('superpods'); an extraordinary feature in Timor waters. Ataúro was a key site for resting cetaceans and a number of unusual displays were observed. An Operator Training Course was provided (including for 15 community members) sharing international best practices, and a two-day workshop resulted in a specific set of Whale Watching guidelines for the country.

The Australian Government funded CI in 2017 to identify marine turtle species and key nesting sites, resulting in the first record of a Hawksbill nest.

Throughout this work, CI has provided coastal monitoring and management training, including a Learning Exchange between Fiji and Timor-Leste. All of CI's activities support local communities and government to develop sustainable environment-based tourism products to diversify income away from fishing. An example of community development support was the establishment of Hydro Panels for drinking water collection in Fatu'u and Akrema in 2019 through the Seligmann Innovation Funds.

Marine Managed Areas	NTZ-Z1 (ha)	Buffer-Z3 (ha)	Total (ha)	Year
1 Uhurala	42	74	116	2017
2 Haruina	38	171	209	2017
3 Darurala	96	115	211	2017
4 Adara	14	35	49	2017
5 Akrema	41	52	93	2017
6 Uaroana	32	52	84	2017
7 Vila	54	84	138	2017
8 Sausuak-Nameta	93	94	187	2018
9 Atekru	12	29	41	2018
10 Iliana	13	19	32	2018
11 Doro	15	23	38	2018
12 Fatu'u	25	42	67	2018
13 Maker	13	30	43	2018
Total	488	820	1,308	

important woodland/*Varanus Atauroensis* habitat (Z2), settlement and home-yard agriculture (Z5), significant archaeological caves (Z2), buffer protected forests (Z3); covering a total area of 53,498 ha.

CORAL TRIANGLE CENTER



Origin: Indonesia

Active in:

Timor-Leste (2012)

Ataúro (2014)



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**CORAL
TRIANGLE
CENTER**

Inspiring People Saving Oceans

Ataúro Vision Statement

One Island, One Management:

Supporting the establishment of an effectively co-managed Marine Protected Area (MPA) on Ataúro Island, as an exemplar for further MPA development in-country, and for showcasing as a Learning Site for regional MPA practitioners throughout the Coral Triangle.

In support of the Ministry of Agriculture and Fisheries (MAF) of Timor-Leste, and in collaboration with the Roman Luan Foundation of Ataúro, CTC is helping facilitate the creation of a Marine Protected Area (MPA) covering the waters surrounding Ataúro Island in the Dili Municipality.

Design and development of this MPA has been undertaken through full consultation with the *Suco* and communities of Ataúro as well as MAF. The proposed MPA covers 13,251.23 ha. A zoning plan, long-term (20 year) management plan and associated regulation has been agreed and produced, delineating key marine areas for full protection, and for sustainable utilization.

The zoning plan incorporates the *Tara Bandu* conservation areas already established by the communities through support from partners WorldFish and CI, but has elaborated further zoning based on the results of a range of socio-economic, governance and bio-physical surveys. These surveys include manta tow assessments (2014), and surveys of marine biota (reef, seagrass and mangrove habitats), species (reef fish, turtles, cetaceans and megafauna), fisheries (practices, markets, gears and target species), social demographics (education, economics, and livelihoods), traditional wisdom and tourism livelihood diversification opportunities (2017).

The management plan promotes effective management of the area in order to preserve and sustainably manage marine and coastal resources; to promote enhanced coral cover, mangrove forest coverage and associated fish biomass; and ensure sustainable fishery productivity and enhanced livelihood opportunities.

The MPA is envisaged to be managed through a collaborative management unit, comprised of representatives from MAF, Dili Municipality, Head of Ataúro sub-district, Head of villages, an MPA community council, and the Roman Luan Foundation. This management unit would report to DG PESCAS and the Head of Pescal Agency Dili Municipality. They would have the authority to manage the MPA; implement surveillance, monitoring and enforcement of MPA regulations (including taking action against violators of the regulations); implement rehabilitation programs, as well as outreach and awareness initiatives. The management unit would also have the authority to collect an entrance fee to the MPA, to provide funds for MPA management.

A ministerial decree to establish the MPA has been drafted reflecting all of the above, and is now going through the process of being authorized.

* The zoning plan includes the following:

- 11 core zones (combined area: 318.47 ha.) – these correspond with the *Tara Bandu* delineations.
- 2 temporary protected zones (combined area: 61.75 ha.)
- 1 marine tourism zone (area: 28.24 ha.)
- 9 aquaculture/cultivation zones (combined area: 65.6 ha.)
- 1 sustainable fisheries zone (all remaining area out to 2 miles around Ataúro Island = 12,777.16 ha.)

EMPREZA DI'AK



Origin: Timor-Leste
 Active in:
 Timor-Leste (2011)
 Ataúro (2012)



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Ataúro Vision Statement

Helping turn traditions into livelihoods, empower women, and build opportunities to promote self-reliance in Ataúro.

EMPREZA DI'AK (ED) means 'Good Business', and is an award-winning Timorese foundation fighting poverty in Timor-Leste through economic empowerment, using the power of business. ED was formed in 2011 by a group of innovative and forward-thinking Timorese and international individuals, and has become one of the leading local organizations working on economic empowerment and livelihoods development.

ED's innovative approach — researching, testing and implementing market based, sustainable opportunities to break the cycle of poverty in rural communities living outside the market economy — was recognized by the Government of Timor-Leste when the organization won the prestigious "Sergio Vieira de Mello Human Rights Award" in 2014.

* *Tourism development is an upcoming sector of focus. Areas of specific focus within livelihood development are handicraft support and women's economic empowerment.*

Since 2012, ED has been directly working with women, men and youth in the development and promotion of inclusive and sustainable tourism in various regions of Timor-Leste; including designing and implementing a range of interventions in the pristine and beautiful (but remote and impoverished) island of Ataúro. This includes community women empowerment projects and livelihood development through the production of handicrafts. Through ED's work, an outlet for these products is now established in Beloi — "Sentru Ataúro Di'ak" — selling an excellent range of crafts including wood carvings, weaving, metal items and clay pots, all made by artisans in some of the more remote towns and villages of Ataúro.

JICA



Origin: Japan
 Active in:
 Timor-Leste (2000)
 Ataúro (2019)



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Ataúro Vision Statement

Contributing to the socio-economic development of Ataúro, strengthening friendships, mutual understanding and exchange of experiences between Timor-Leste and Japan.

In February 2019 the Japanese International Cooperation Agency (JICA) dispatched volunteer support to Ataúro, working in collaboration with Empreza Di'ak NGO. The support is focused on improving the quality and marketability of local ceramic products produced by local communities. The aim is to advance product quality to enable new market access nationally.

Sharing experiences in quality ceramic production has been implemented through community visits, with the aim to:

- (1) contribute towards the development or construction of socio-economic conditions locally;
- (2) strengthen friendships and mutual understanding between Timorese and Japanese cultures; and
- (3) bring back to Japanese society the results of the volunteers' activity experience.

Under this initiative, support is being provided up to February 2021.

KOICA



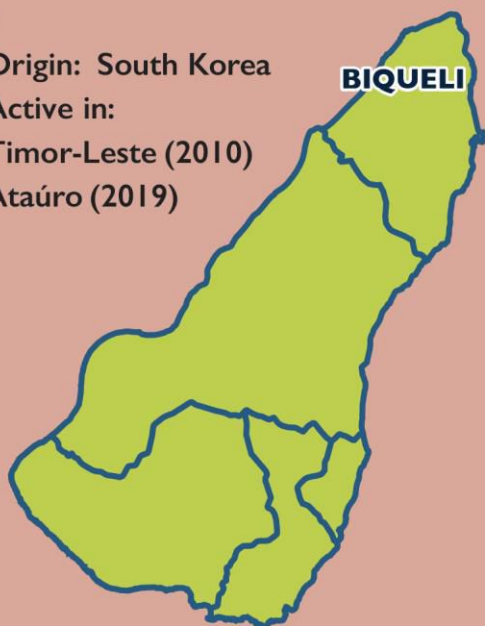
Origin: South Korea



Active in:

Timor-Leste (2010)

Ataúro (2019)



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Ataúro Vision Statement

Supporting Information, Communication and Technology (ICT) training, and cross-culture learning through language.

Korea International Cooperation Agency (KOICA) is currently implementing a number of projects and programs in Timor-Leste targeting key developmental sectors such as education, health, agriculture, fisheries and infrastructure.

In Ataúro, support has been provided to promote renewable energy through the provision of solar energy panels, and work is ongoing to promote capacity building in Information, Communication and Technology (ICT). This capacity support is being provided through a volunteer program in cooperation with the Ministry of State Administration.

In addition to ICT training, support for Korean language training is provided.

Under programs related to World Friendship Korea (WFK) and the KOICA Fellowship program, overseas training opportunities are also provided nationally, as well as a project-based invitational program, and Korea Master's degree scholarship program.

MERCY CORPS



Origin: U.S.A.



Active in:

Timor-Leste (2008)

Ataúro (2017)



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Ataúro Vision Statement

Promoting community resilience to climate vulnerability and natural disasters.

The services and products promoted on Ataúro operate within the market economy to enable self-sustainability, and are focused on two key areas:

- (1) Increasing disaster resistance and food self-sufficiency through improved access to essential food production inputs, grain storage systems and promotion of climate-smart and gender inclusive agriculture and aquaculture production systems. This includes, for example, the provision of grain silos and water storage systems, and training on post-harvest grain management techniques.
- (2) Increasing resilience through promoting a culture of savings and access to credit, strengthening of critical market systems and actors, and restoration of essential disaster-affected livelihoods. This includes the establishment of savings and loans groups, and targeted efforts on livelihood restoration through access to capital.

Through this initiative, there are now 22 Village Savings and Loan Associations (VSLA) active on Ataúro, with approximately 440 members. To date (2019), 120 households have received training for grain storage, 178 for climate smart agriculture, and 87 for rainwater harvesting techniques. Such efforts aim to ensure communities are as resilient as possible to climate vulnerabilities and natural disasters.

In addition to the above program, Mercy Corps facilitates the recently formed 'Plastics Solutions Alliance', an initiative that brings together development partners and the private sector to improve plastic waste management. Alliance members (Mercy Corps, Heineken, Caltech, KOICA, and USAID) bring innovative technology solutions to the plastics value chain, supporting the growth of upcycled plastic products and plastic alternatives while also working closely with the Government of Timor-Leste and other environmental stakeholders to support uptake of the 3R behaviors (reduce, reuse, recycle) for a cleaner healthier and more prosperous nation. This three-year initiative will be activating in Ataúro soon, and will be aiming to collaborate with existing initiatives to support shared goals around plastic waste management.

Mercy Corps has been supporting activities on Ataúro Island since 2017. Under the CROPS program, and more recently the USAID *Resilensia Di'ak* (Good Resilience) program, Mercy Corps is helping poor and vulnerable rural farming households become food secure by improving their resilience and reducing their exposure to recurring natural disasters. The program is designed to address the priority root causes that make farmers' livelihoods highly sensitive to natural disasters as well as strengthen the disaster response and restoration capacity of local systems. This includes re-establishing and improving agricultural systems, providing self-sustaining financial services and supporting market systems.

On Ataúro Island, Mercy Corps provides support services predominantly through six Community Development Agents (CDAs). These are small-scale entrepreneurs from target communities in Ataúro, selected based on their business development skills, leadership skills, and their role as influencers and change agents trusted in their communities. They are individuals willing to serve their society, and are business-minded, able to navigate new market opportunities and act as a business advisor to groups. On Ataúro, three of the six CDAs (50 percent) are women, and all CDAs have received a range of training in cross-cutting areas (such as business development and communications) as well as technical specialties (in the areas detailed below). CDAs are also linked to larger wholesalers, so that they are able to provide agricultural inputs sales to communities. Through CDA support, communities are able to improve their access to financial services, while also adopting improved agricultural practices.

ASSOSIASAUN TURIZMU MARITIMA IHA TIMOR-LESTE



Origin: Timor-Leste



Active in:

Timor-Leste (2019)

Ataúro (2019)



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Ataúro Vision Statement

As the newly-established body for the marine tourism sector in Timor-Leste, the ATM-TL is committed to facilitating / supporting and promoting sustainable marine tourism development and the conservation of Timor-Leste's globally-significant marine ecosystems.

The Dili-Ataúro Island region is currently the primary location for marine tourism activities in Timor-Leste. Significantly, the region (particularly Ataúro Island) is also a major focus for future sustainable marine tourism development activities, under the ATM-TL. The ATM-TL Strategy and Action Plan (2019-2021) has three strategic pillars, under which priority development areas have been identified for funding and implementation (see table below).

Some of the priority development activities identified for Ataúro Island include:

- **Tourism Development:** strengthening national/international promotion and destination marketing (coral reef diving, whale and dolphin watching, marine conservation volunteer tourism); supporting new marine tourism activities and product development (conservation and community-development volunteer expeditions, community-based whale & dolphin watching, snorkelling/traditional fishing, market and village tours, shark diving); expanding/strengthening tourism markets (linkages with school tours, Catholic Immersion programs, Friendship groups).

- **Marine Conservation:** promoting sustainable diving (Green Fins certification), national whale watching guidelines, marine tourism revenues for conservation (reef tax, OceanEye), volunteer conservation tourism, community-based marine conservation.
- **Capacity-building & Training:** advancing maritime safety, tour guiding, responsible whale and dolphin watching (operators, local fishers), Green Fins training.
- **Science/Research:** encouraging marine 'citizen science' programs (whale and dolphin research/monitoring, ReefCheck, marine debris, Ocean Eye, SharkWatch).

Importantly, ATM-TL is working closely with ATKOMA, local marine tourism development partners (BV, CI, ROLU, local communities), government agencies and key donor/stakeholders (including USAID, MDF, AF, FAO) to ensure a coordinated and integrated approach to sustainable marine tourism development and conservation of Ataúro's globally-significant marine ecosystems.

Strategic Pillar 1	Strategic Pillar 2	Strategic Pillar 3
Collaboratively develop a coordinated, diverse and responsible marine tourism sector in Timor-Leste.	Develop the Timor-Leste 'blue brand' and position the country as a global marine ecotourism destination.	Strengthen the marine ecotourism sector through education, environmental protection and community-based marine tourism.
1.1. Establish the ATM-TL as a leading advocate for marine tourism in Timor-Leste.	2.1. Develop and promote a global 'Blue Brand' and Timor-Leste as a global marine ecotourism destination.	3.1. Support conservation and improved marine environmental protection.
1.2. Develop a diverse marine tourism sector.	2.2. Support a global niche dive tourism destination.	3.2. Educate and support local leaders and youth in ocean awareness and marine tourism.
1.3. Support maritime safety, codes of practice and national/international standards.	2.3. Develop a world-class, sustainable whale-watching industry.	3.3. Develop and promote community-based conservation and marine ecotourism.

NATERRA



Origin: TL



Active in:

Timor-Leste (2009)

Ataúro (2015)



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naTerra's activities on Ataúro focus on three key areas of work:

(1) Learning Center

In partnership with FAO and CI, and with support from the IBSA fund, naTerra has constructed a Sustainable Agriculture and Permaculture Learning Centre in Atekru. Opened in May 2019, the center promotes healthy and resilient lifestyles by advancing self-sufficiency in communities. Key activities include:

- Capacity building, through: short and long-term courses, internships, permaculture design certificate courses (PDC), EcoVillage design education courses (EDE), and practical trainings (such as computer and language skills);
- Promoting food and energy security, and economic autonomy;
- Empowering Ataúro's communities towards sustainable development;
- Contributing to the conservation and preservation of local culture and environment;
- Promoting ecotourism through visits to the EcoVillage demonstration unit;
- Advancing an inter-exchange of culture and knowledge.

As a Learning Center our ambition is to serve the community as a meeting point for information exchange, discourse, sharing of resources, and cooperation. The center is energy self-sufficient (powered by solar photovoltaics) and has quickly become a key feature in the community. Funding is now sought for further



Ataúro Vision Statement

Empowering and building the capacity of local communities in Ataúro to be self-sustaining, healthy societies, living in harmony with nature.

development and roll out of trainings to engage wider communities across Ataúro, with the aim that the center will become self-sufficient in the coming years through ethical tourism visits, local product sales and certified course delivery.

(2) Women's Cooperative

Originated under partner programs (particularly 'Varanda verde') naTerra has supported the structural organizing of these women's cooperatives for optimal efficacy. To date, six women head the program that involves 30 households. Livelihood related training has been provided on food processing (dried fish, tea and moringa powder), product storage, packaging and access to markets. These women also run the Learning Center, and five associated accommodation bungalows constructed at the site that welcome agro-tourist groups from throughout the region. Moving forward, further training in hospitality and guest management aims to support the self-sustainability of this initiative and provide further income for families locally.

(3) School gardens

Initiated in six schools across Ataúro in partnership with Permatil, naTerra supported the provision and establishment of rainwater catchment systems (guttering and storage tanks) and capacity building for permaculture. One of the most successful spin offs from this initiative was the subsequent establishment of individual kitchen gardens in households, as communities built on what was learned in the school gardens program for use in their everyday lives.

naTerra is a locally managed NGO, successfully achieving goals, with a clear mission moving forward. Ultimately the organization aims to be self-sufficient, as an exemplar institution for sustainability and autonomy.

PEMSEA



Origin: Philippines

Active in:

Timor-Leste (2014)

Ataúro (2014)



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Ataúro Vision Statement

Developing and implementing Integrated Coastal Management (ICM) with Dili District to demonstrate how MPA management effectiveness can be enhanced through ICM.

Partnerships in Environmental Management for the Seas of East Asia (PEMSEA) was created with a clear mission — to foster and sustain healthy and resilient coasts and oceans, communities and economies across the Seas of East Asia through integrated management solutions and partnerships.

Since 2014, PEMSEA has been working in collaboration and partnership with Dili District on the development and implementation of an Integrated Coastal Management (ICM) program, to demonstrate how management effectiveness of MPA's can be enhanced through ICM.

Under a four-year work program (2015-2019) work has focused on three key areas at the national and regional level:

(1) Partnerships in Ocean/Coastal Governance, including:

- support for National Ocean Policy;
- institutional arrangements for the implementation of the Sustainable Development Strategy for the Seas of East Asia (SDS-SEA) national coordination;
- national reporting;
- review of sectoral policies/legislations; and
- the development of ICM case studies.

(2) Healthy and Resilient Coastal Ecosystems (through ICM), including:

- scaling up national ICM implementation to cover >20% coastline;
- establishing ICM capacity building/technical support services;
- developing ICM governance mechanisms at municipal level; and
- ICM Code recognition.

At the site level, work has been done to demonstrate the application of ICM to enhance issue-specific management programs in pilot sites at the village-level (supporting habitat/biodiversity, MPA management effectiveness, sustainable fisheries/EAFM, alternative livelihoods, climate change adaptation and disaster risk reduction, and the promotion of innovative financing mechanisms).

(3) Knowledge management (through environmental monitoring and local reporting).

Work in Ataúro has been predominantly related to the second area of work described above, with efforts focused in Suco Vila Maumeta through local leadership.

PERMATIL



Origin: U.S.A.



Active in:

Timor-Leste (2001)

Ataúro (2016)



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Founder, Director

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Ataúro Vision Statement

Supporting the people of Ataúro to live well, and strengthen their economic, social, ecological and cultural life through the sustainable utilization of natural resources for intergenerational equity.

PERMATIL (Permaculture Timor-Leste) supports communities through the concepts and practices of permaculture which emphasizes the ethics of: **'Earth Care; People Care; and Fair Share.'** Permaculture systems use a holistic approach to support the everyday life of community members, including clean water, food, health, education and cooperative work, waste management, energy and aquaculture, rivers, forests, animal management, etc.

In Ataúro, PERMATIL began support work in 2016, following their proven approach of engaging and leveraging local knowledge to problem-solve community challenges. PERMATIL's first support project was in Suco Vila Maumeta and focused on water conservation through spring restoration activities. This water-based work expanded over the following years into Suco Biqueli, particularly the hamlet of Uaro-Ana and sub-hamlet of Akrema, where spring restoration and groundwater replenishment work involved the development of an elevated hill-based reservoir, established to channel rainwater into the local aquifer and avoid loss from run-off, as well as the establishment of a series of rainwater catchment systems throughout the communities. This work has inspired other communities to replicate this approach in other areas of Ataúro.

In 2017, PERMATIL also supported the first 'school garden' to be established in Biqueli (following a programmatic formula designed by PERMATIL, with a proven track record across Timor-Leste). The program supports schools to establish gardens and teaches students from grades 1 to 9 the skills needed to grow their own food sustainably. The garden output supports the nutritional needs of the school students, and increases food availability for the community; thus reducing hunger and promoting improved health.

During the set-up process of the school garden in Biqueli, teachers from all the schools in Ataúro attended training, leading to five further school gardens being established across the island. The site in Biqueli now also hosts three nurseries for nurturing fruit tree saplings (including citrus trees, jackfruit, avocado, etc.), and a seed bank to provide a source of herb and plant seeds for community use (including turmeric seeds, chilli, lemongrass and a range of herbs).

From the success of this school garden, this permaculture-based approach was further disseminated to wider communities, largely through the school children and teachers, resulting in over 50 families in Uaroana now having functioning home gardens (and all 37 families in the sub-hamlet of Akrema, as well as the church, also establishing home gardens).

This program has dramatically changed the lives of these communities, who used to walk 6-7 km each week to the main market in Beloi to purchase vegetables brought over from Dili. Instead, they now not only live off their home-grown produce, but have become suppliers of fresh goods to the market.

PERMATIL's extensive grassroots experience and proven permaculture success has attracted considerable national and international interest, with groups from around the world visiting Ataúro to learn from their achievements. Their wider work has also resulted in the release of a three-volume publication 'The Tropical Permaculture Handbook,'* which is openly accessible online, and is a product of Timor-Leste that has been downloaded in more than 170 countries worldwide.

Continued support work in Ataúro is funding dependent, and aims to explore crop diversification, further garden development in wider communities, and the implementation of additional water conservation and management systems across the island.

* <https://permacultureguidebook.org/>

ROMAN LUAN



Origin: Timor-Leste

Active in:

Timor-Leste (2000)

Ataúro (2000)



Contact:

Avelino Pereira Fernandes

Executive Director

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Ataúro Vision Statement

Supporting Ataúro communities to be sustainable, healthy, and educated to maintain the values of our local culture and participate actively in conserving our environment, natural and human resources for the welfare of both the island and all of Timor-Leste.

Under the direction of *Conselho Nacional da Resistência Timorese* (CNRT) Roman Luan was formed in the early years of independence, with the mission to elevate education, agriculture, fisheries and environmental protection on Ataúro Island, and support sustainable development.

Preliminary work focused on educating communities about tourism, and the potential effects of both mass tourism and ecotourism. With support from the Australian Conservation Federation, (ACF) Roman Luan conducted a roadshow across the island, conducting communication and outreach activities, and undertaking consultations with local communities. Through this work, the people of Ataúro decided to adopt “ecotourism” as a preferred development mechanism. This led, in early 2001, to Roman Luan establishing and managing the first community ecolodge on Ataúro (*Tua Koin*) and running shuttle services (*Maun Alin Boat*, Dili-Ataúro-Dili).

In 2004, communities on Ataúro began to talk about establishing a tourism association on the island and with the support of the International Labor Organization (ILO) through Roman Luan, Grupo Turizmu Ataúro (GTA) was established. In 2016 this group’s name was changed to ATKOMA (see associated profile page).

Key areas of focus for Roman Luan today include the following:

Sustainable Marine and Coastal Management — working with local island community members and partner organizations, Roman Luan supports the management of local marine protected sites (*Tara Bandu*). Support is also provided to raising awareness of the importance of site management, as well as sustainable fishing and farming practices.

Women’s Empowerment, Recycling and Upcycling — assisting women’s groups in managing waste on the island, and in reducing the number of bottles and other plastics in order to keep our ocean and pristine corals safe from plastic pollution.

Renewable, Accessible Energy — promoting the use of renewable energy by installing solar panel systems, and providing maintenance and repair for old systems provided by international aid and the government. This initiative also supports schools, clinics and sub-village offices located in remote areas to have electricity (with no access to the island’s electrical grid).

Roman Luan works with a range of agencies and organizations pertinent to the above sectors, and regularly provides a liaison role between visiting development partners and communities on Ataúro Island.

WORLDFISH

Origin: Malaysia

Active in:

Timor-Leste (2009)

Ataúro (2013)

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WorldFish began work in Ataúro under the Fisheries Sector Support Program (2015–2019) in collaboration with the Ministry of Agriculture and Fisheries (MAF) of Timor Leste. Through this program, and through additional support from an 'Inspire Challenge' grant from CGIAR, WorldFish have undertaken a wide range of coastal resource related surveys, studies and assessments on Ataúro, including:

- Fisheries catch data studies (more information below)
- Reef fish biomass studies (using underwater visual census techniques)
- Livelihoods studies (for fishers, gleaners, traders, fishery product retailers)
- Livelihood diversity and dependency studies
- Gender in fisheries studies
- Post-harvest management and value chain studies
- Fisheries governance studies
- Studies to assess the potential for fisheries resources co-management

Based on these studies, WorldFish have implemented two key interventions on Ataúro:

- (1) **Establishment of Ataúro's first co-managed marine area**
Through extensive capacity building and participatory engagement with fishers, communities, Suco leaders and government representatives, WorldFish supported the establishment of Ataúro's first 'Tara Bandu' in Adara community. This spatially delineated area has a range of fishery-related regulations and no-take obligations associated with it, and was endorsed and adopted by the Adara community and wider Ataúro fishers in 2016. * 103

**Ataúro Vision Statement**

Supporting the sustainable development of small-scale fisheries and promoting food security for communities dependent on marine and coastal resources in Ataúro.

- (2) **Implementation of cutting-edge data management and analytics system for small-scale fisheries.**

In 2016, WorldFish and the General Directorate of Fisheries began work on PeskAAS — an Automated Analytics System for Small-Scale Fisheries in Timor-Leste. This work involved considerable capacity building and data collection related to the fisheries in key Ataúro sites. On-going collection systems were established to provide insights into target species (by habitat and landed weight) and trends in catch per unit effort.

In 2018, this platform was further augmented through a partnership with technology firm Pelagic Data Systems (PDS) through which solar-powered tracking devices were installed on fishing boats across Timor-Leste, including Ataúro. The devices track boat movements and send satellite data back to the dashboard, revealing patterns of fishing ground utilization and spatial resource use areas.

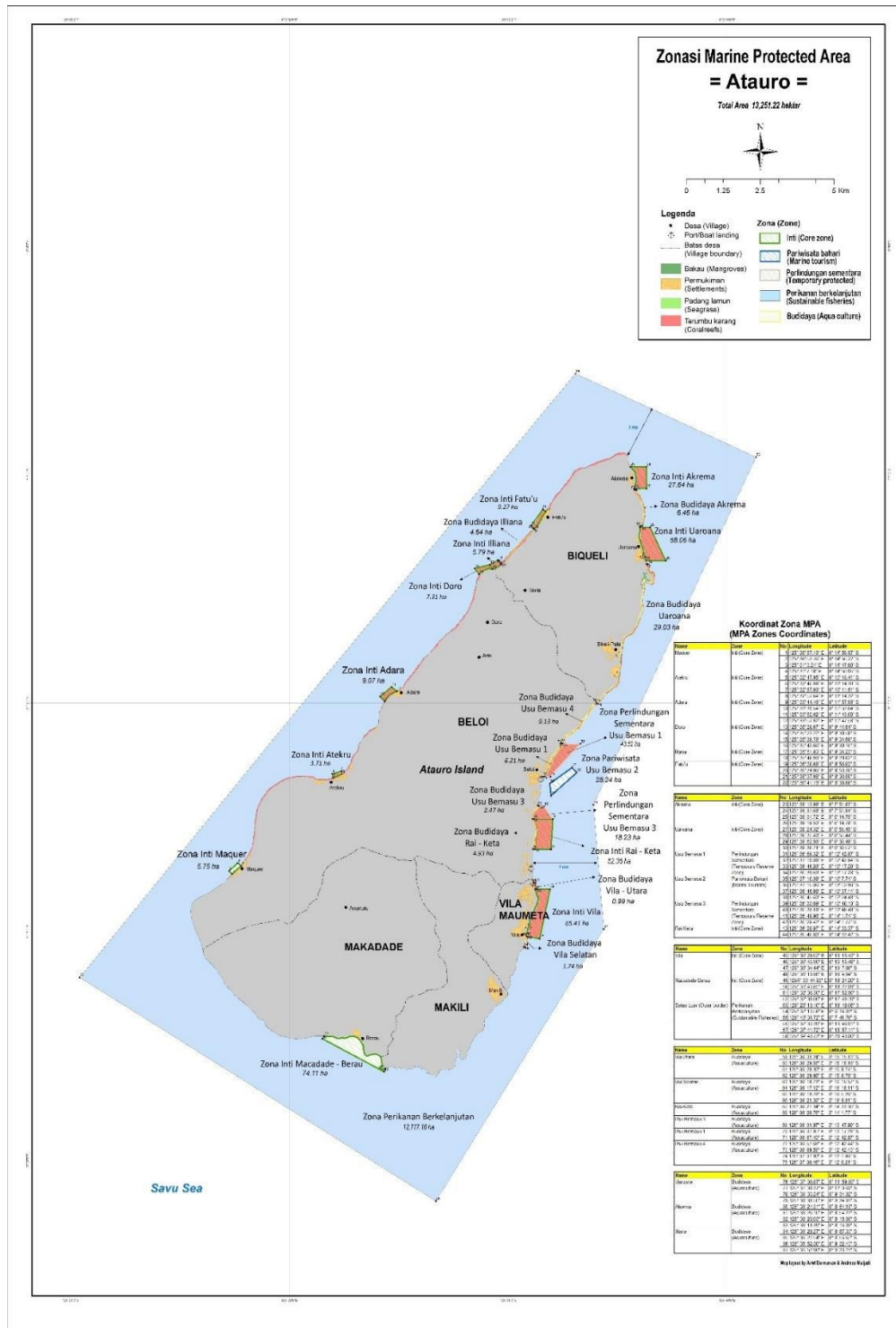
Following extensive tech-based design trials for automated analysis and real-world profile testing, the PeskAAS platform was launched in 2019, and is **one of the most sophisticated data collection systems for small-scale fisheries in the world**. Publicly available, it enables interface users to access near real-time data and analytics from across the nation.

Moving forward, WorldFish aims to install PDS devices on approximately 20 percent of Timor-Leste's national fleet, with the dashboard management moving under the responsibility of MAF in 2020 while WorldFish continue to provide backstop technical support.

* Based on this *Tara Bandu* model supported by WorldFish, a further ten sites have been established around Ataúro, supported by development partners.

Appendix Six: MPA (One Island, One Management) Proposal

In 2019, the following draft zoning plan was prepared by the Coral Triangle Center as the proposed new Marine Protected Area for Ataúro Island.



ZONES AND DESIGN: Under this plan, the islands' marine and coastal environment has been divided into five key categories of zones:

(1) CORE ZONES * Intention: <ul style="list-style-type: none"> • Absolute protection of fish habitats and populations. • Research. • Education. <i>* These zones correspond with the existing Tara Bandu sites established by the communities</i>		# in MPA: 11 Combined area: 318.47 ha
CRITERIA	PERMITTED ACTIVITIES	NON-PERMITTED ACTIVITIES
<ul style="list-style-type: none"> • site for fish spawning, nurturing and / or mangrove area; • constitutes a habitat for certain aquatic biota that are priority and unique / endemic, rare and / or charismatic; • has a diversity of aquatic biota, species and their ecosystems; • has the characteristics of a natural ecosystem, and represents healthy key biota; • has relatively healthy waters, with minimal human disturbance; • has sufficient area to ensure the survival of certain types of fish to support effective fisheries management and to ensure natural bio-ecological processes; • provides a source of germplasm for MPA 	<ul style="list-style-type: none"> • Protection of ecological processes that support the survival of a particular species or resource of fish and its ecosystem. • Patrolling and preventing activities that can result in changes in the integrity of the area's potential and changes in the function of the area. • Ecosystem recovery and rehabilitation. • Basic research uses observation methods to collect basic data. • Applied research uses survey methods for the purpose of monitoring biological and ecological conditions. • Education without taking material directly from nature. • Installation of boundary buoys. • Swim / snorkel without taking anything • Scuba diving without taking fish or other biota • Passing through the waters • Traditional ceremony 	<ul style="list-style-type: none"> • Utilization by taking / capturing directly from nature with or without using tools such as: basic fishing rods, trolling fishing, shark fishing, as well as longline fishing, gill nets, bottom nets and surface nets either still or pulled, charts, tools meshes, traps, sero, and fish spears or arrows. • Catching protected biota such as turtles, dugongs, dolphins and whales. • All destructive utilization activities, either with or without tools, such as: bombs, poisons, anesthetics, muroami, the use of diving compressors, overturning or turning over corals, taking corals or sand and cutting or cutting mangroves. • Marine aquaculture activities, such as: seaweed farming and pearl farming. • Infrastructure development such as jetties, tourist buildings and mooring buoys. • Swimming / diving by taking fish or other biota • Large ships pass by

(2) MARITIME TOURISM ZONE Intention: <ul style="list-style-type: none"> • Protection of fish habitats and populations; • Tourism and recreation; • Research and monitoring; • Education. 		# in MPA: 1 Area: 28.24 ha
CRITERIA	PERMITTED ACTIVITIES	NON-PERMITTED ACTIVITIES
<ul style="list-style-type: none"> • has a natural tourism appeal in the form of aquatic biota along with beautiful and unique aquatic ecosystems; • has sufficient area to guarantee potential preservation and attractiveness to be used for tourism and recreation; • has the character of the object of research and education that supports conservation interests; and • have relatively good water conditions for various utilization activities without damaging the original ecosystem. 	<ul style="list-style-type: none"> • Protection of ecological processes that support the survival of a particular species or resource of fish and its ecosystem. • Patrolling and preventing activities that can result in changes in the integrity of the area's potential & changes in function of the area. • Ecosystem recovery and rehabilitation. • Basic research uses observation methods to collect basic data. • Applied research uses survey methods for the purpose of monitoring biological and ecological conditions. • Education without taking material directly from nature. • Installation of boundary buoys. • Swim / snorkel without taking anything • Scuba diving without taking fish or other biota • Passing through the waters • Traditional ceremony 	<ul style="list-style-type: none"> • Utilization activities by taking / capturing directly from nature with or without using tools, such as: fishing both basic fishing rods, trolling fishing, shark fishing, and longline fishing, gill nets, bottom nets and surface nets either still or pulled, puri chart, step on charts, floating charts, snares, traps, sero, and fish spears or arrows. • Catching protected biota such as turtles, dugongs, dolphins and whales • All destructive utilization activities, either with or without tools, such as: bombs, poisons, anesthetics, muroami, the use of diving compressors, overturning or turning over corals, taking corals or sand and cutting or cutting mangroves. • Marine aquaculture activities, such as: seaweed farming, fish farming, pearl farming, cages, and ponds. • Swimming / diving by taking fish or other biota • Large ships pass by

(3) TEMPORARY PROTECTION ZONES		# in MPA: 2
Intention: <ul style="list-style-type: none"> • Protection of fish habitats and populations; • Research and monitoring; • Education. 		Combined area: 61.75 ha
CRITERIA	PERMITTED ACTIVITIES	NON-PERMITTED ACTIVITIES
<ul style="list-style-type: none"> • is a fish spawning, nurturing and / or mangrove area; • has a diversity of types of aquatic biota and their ecosystems; • has the characteristics of a natural ecosystem, and represent the existence of certain biota which is still original; and germplasm sources for MPA • has sufficient area to ensure the survival of certain types of fish to support effective fisheries management and to ensure natural bio-ecological processes. 	<ul style="list-style-type: none"> • Protection of ecological processes that support the survival of a particular species or resource of fish and its ecosystem. • Patrolling and preventing activities that can result in changes in the integrity of the area's potential and changes in the function of the area. • Ecosystem recovery and rehabilitation. • Basic research uses observation methods to collect basic data. • Applied research uses survey methods for the purpose of monitoring biological and ecological conditions. • Education without taking material directly from nature. • Installation of boundary buoys. • Swim / snorkel without taking anything • Scuba diving without taking fish or other biota • Passing through the waters • Traditional ceremony 	<ul style="list-style-type: none"> • Utilization activities by taking / capturing directly from nature with or without using tools, such as: fishing both basic fishing rods, trolling fishing, shark fishing, and longline fishing, gill nets, bottom nets and surface nets either still or pulled, puri chart, step on charts, floating charts, snares, traps, sero, and fish spears or arrows. • Catching protected biota such as turtles, dugongs, dolphins and whales. • All destructive utilization activities, either with or without tools, such as: bombs, poisons, anesthetics, muroami, the use of diving compressors, overturning or turning over corals, taking corals or sand and cutting or cutting mangroves. • Marine aquaculture activities, such as: seaweed farming, fish farming, pearl farming, cages, and ponds. • Swimming / diving by taking fish or other biota • Large ships pass by

(4) SUSTAINABLE FISHERIES ZONE		# in MPA: 1
Intention: <ul style="list-style-type: none"> • Protection of fish habitats and populations; • Tourism and recreation; • Research and monitoring; • Education 		Area: 12,777.16 ha
CRITERIA	PERMITTED ACTIVITIES	NON-PERMITTED ACTIVITIES
<ul style="list-style-type: none"> • has conservation value, but can tolerate fishing with environmentally friendly tools and methods; • has ecosystem characteristics that allow for a variety of environmentally friendly uses and supports fisheries continuation; • has a diversity of aquatic biota species and their ecosystems; • have relatively good water conditions to support multifunctional activities by not damaging the original ecosystem; • has sufficient area to guarantee sustainable capture fisheries and community socio-economic and cultural activities; and • has the characteristics of the potential and representation of aquatic biota with economic value. 	<ul style="list-style-type: none"> • Patrolling and preventing activities that can result in changes in the integrity of the area's potential & changes in function of the area. • Ecosystem recovery and rehabilitation. • Basic research uses observation methods to collect basic data. • Applied research uses survey methods for the purpose of monitoring biological and ecological conditions. • Education • Installation of boundary buoys. • Swimming / snorkeling and scuba diving • Utilization activities by taking / capturing directly from nature with or without using tools, such as: fishing both basic fishing rods, trolling fishing rods, gill nets, silent bottom nets, surface nets either still or pulled, diving both with tools and without tools, and fish spears or arrows • Passing through the waters • Traditional ceremony 	<ul style="list-style-type: none"> • All destructive utilization activities, either with or without tools, such as bombs, poisons, anesthetics, muroami, the use of diving compressors, traps, rolling or turning over corals, using small-eyed nets, taking corals or sand and cutting or cutting mangroves. • Catching protected biota such as turtles, dugongs, dolphins and whales. • Marine aquaculture activities, such as: seaweed cultivation, fish farming, pearl farming, cages, and fishponds. • Large ships pass by

(5) CULTIVATION ZONES		# in MPA: 9
Intention: <ul style="list-style-type: none"> • Protection of fish habitats and populations; • Seaweed cultivation; • Research and monitoring; • Education. 		Combined area: 65.6 ha
CRITERIA	PERMITTED ACTIVITIES	NON-PERMITTED ACTIVITIES
<ul style="list-style-type: none"> • has conservation value, but can tolerate fishing with environmentally friendly tools and methods; • has ecosystem characteristics that allow for a variety of environmentally friendly uses and supports sustainable fisheries; • has a diversity of aquatic biota species and their ecosystems; • have relatively good water conditions to support multifunctional activities by not damaging the original ecosystem; • has sufficient area to guarantee sustainable capture fisheries and community socio-economic and cultural activities; and • has the characteristics of the potential and representation of aquatic biota with economic value. 	<ul style="list-style-type: none"> • Protection of ecological processes that support the survival of a particular species or resource of fish and its ecosystem. • Patrolling and preventing activities that can result in changes in the integrity of the area's potential and changes in the function of the area. • Ecosystem recovery and rehabilitation. • Basic research uses observation methods to collect basic data. • Applied research uses survey methods for the purpose of monitoring biological and ecological conditions. • Education • Installation of boundary buoys. • Seaweed farming activities. • Passing through the waters • Traditional ceremony 	<ul style="list-style-type: none"> • All destructive utilization activities, either with or without tools, such as bombs, poisons, anesthetics, muroami, the use of diving compressors, traps, rolling or turning over corals, using small-eyed nets, taking corals or sand and cutting or cutting mangroves. • Catching protected biota such as turtles, dugongs, dolphins and whales. • Aquaculture activities other than seaweed cultivation, such as fish farming, pearl farming, cages, and fishponds. • Swimming / snorkeling and scuba diving. • Large ships pass by

LEGAL FRAMEWORK: This MPA plan (One Island, One Management) would be endorsed through Decree Law no. 6/2004 on Fisheries Management.

MANAGEMENT FRAMEWORK: With regards to onsite management of the MPA, the decree proposal submitted to Pescas on 27th September 2019 outlines in detail the anticipated management unit set up, with clear goals, vision, conservation targets, roles and responsibilities, as follows.

Goal of Ataúro MPA: A multi-purpose MPA for sustainable marine tourism, sustainable fisheries, and marine biodiversity protection

Vision: Ataúro Island MPA is established and managed effectively with community participation for today and future welfare.

Mission:

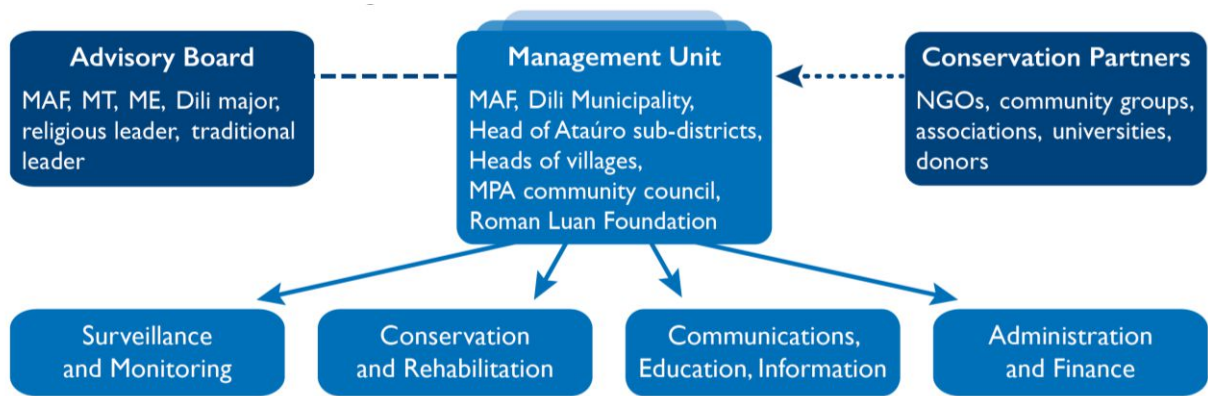
(a) Supporting MPA management effectiveness with stakeholders' collaboration.

(b) Promoting sustainable tourism (agro and marine) that bringing benefit and welfare for communities.

Total Area of MPA: 13,251.22 ha.

Conservation Targets: 1) coral reefs, 2) mangroves, 3) seagrass, 4) sea turtles, 5) dugong, 6) sharks, 7) dolphins, 8) whales

Management Unit Structure: This has been proposed as follows.



Roles and Responsibilities: The below has been proposed in the OIOM submission.

Management Unit of MPA	Advisory Board	Conservation Partners
a) Develop draft document of 5 and 1 year workplan and its implementation based on approval from Director General Pescas b) Responsible to make semi-annual and annual report to DG Pescas and Head of Pescas Agency Dili Municipality regarding progress of management plan implementation c) The management unit of MPA has authority to managed the Atauro MPA daily based on approved management plan document d) The management unit of MPA has authority to do surveillance and monitoring in Atauro MPA . The management unit has authority to take action and giving punishment if violation happen on MPA and zoning system regulation. e) The management unit of MPA has authority to do ecosystem conservation and rehabilitation in Atauro MPA f) The management unit can do activities related with awareness and information distribution regarding marine conservation and MPA management g) The management unit of MPA has authority to do entrance fee collection to Atauro MPA from tourism and fisheries activity . The management unit should make regular report to the Director General Pescas and Head of Pescas Agency Dili Municipality, as well as conducting audit on fee utilization. h) The management unit has authority to conduct partnership and collaboration nationally, regionally and global based on approval from Director General Pescas.	a) The advisory board should be reported by the MPA management unit and giving evaluation on the annual report. b) Provide advice and inputs to the MPA management unit c) Invited on the annual meeting by the MPA management unit on annual workplan development.	a) Involved and giving input on 5 years and 1 year workplan development b) Involved and giving input on annual report meeting by MPA management unit c) Involved in implementation of management and workplan d) Proposing collaboration on program, research and financing related with MPA Atauro management.

OBSERVATIONS AND RECOMMENDATIONS:

- I. **Marine Designations.** Under this MPA plan the existing tara bandu sites have been transitioned to become locked-in No-Take Zones (NTZs). Once declared, these would no longer be changeable by communities, and the existing suco regulations would be over-ridden by the MPA designation and their associated rules and resource-use limitations. In addition to the existing tara bandu sites being reflected as core zones, additional core zones have been developed based on scientific surveys to

promote ecological robustness of the reef system and associated fisheries of the area (it should be noted that the tara bandu sites themselves were selected by communities and were not based on any strong scientific credentials).

Overall however, the classifications of the zones and design approach meets internationally recognized standards for MPA design, and utilized a range of standard zoning design criteria, scientific data and socio-economic considerations in its development. Nonetheless, lack of clarity exists in the “difference” between some of the zones in terms of permitted and non-permitted activities. As the above tables show, some zones, while classified differently, have exactly the same use and non-use listings, with only the ‘intentions’ of the zones differing. Further clarification and review would be advisable to ensure there is clarity around this, and these zones’ activities are clear for all stakeholders.

This plan relates only to the marine and coastal environment. As such, there are no land-based designations associated with this plan.

- II. **Legal Framework.** While endorsement of this plan is expected under Pescas, Decree Law no. 6/2004 on Fisheries Management, it is worth noting that at the time of writing a new law (on the ‘Legal Regime for the Management and Regulation of Fisheries’) is currently going through Ministerial approval and is expected to supersede the existing law no. 6/2004. Therefore it is unclear whether any endorsement under the old law would be recognized under the new regime, or would require re-endorsement once the new regime comes into effect.
- III. **Management Framework.** The collaborative management unit proposed in this plan successfully meets internationally recognized standards and best practice approaches. Comprised of government agencies (national and local), community and CSO representatives, the only key stakeholder group so far not represented are the private sector. Therefore it would be advisable to ensure such business sector reps are included in the community council or as a separate group within the management unit.

In this plan, the MPA unit has the authority to collect an entrance fee to Ataúro. Clarity around this is required however, as it is unclear whether the revenue is expected to be handled via central offices or remain locally accessible. In addition to this, given the current plans underway to charge a tourism fee on the island (to be managed through a visitors center, most likely through ATKOMA association), as well as the existing tara bandu user fee (currently loosely administered by private sector partners, but requiring clarity), such an additional MPA fee would add to the already complex layers of fee’s to visitors being developed. Such multi-layered fee systems are highly off-putting for visitors, who may end up avoiding to visit the area due to the high costs, confusion and lack of clarity and accountability. See association recommendations to address this in draft objective M-5.



ATAÚRO ISLAND: SUSTAINABLE MANAGEMENT PLAN