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CRISTO REI Sustainable Management Plan



**CRISTO REI:
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

Photographs:

Front cover (top): The Cristo Rei (Christ the King) monument of Jesus atop a globe of the world at Fatu Cama Cape in the Cristo Rei Protected Area is a main tourist attraction in Timor-Leste © Martine Perret/Ministry of Tourism, Commerce and Industry. Front cover (bottom): Cristo Rei beach is a popular recreation destination © Ministry of Tourism, Commerce and Industry.

Back cover: The forested hills and spectacular coastline of Cristo Rei © Ministry of Tourism, Commerce and Industry.

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ACRONYMS & ABBREVIATIONS

| | |
|--------|---|
| GOTL | Government of Timor-Leste |
| IBA | Important Bird and Biodiversity Area |
| IUCN | International Union for Conservation of Nature |
| LC | Least concern |
| MAE | Ministry of State Administration, Government of Timor-Leste |
| MAF | Ministry of Agriculture and Fisheries, Government of Timor-Leste |
| MEL | Monitoring, Evaluation and Learning |
| MTCI | Ministry of Tourism, Commerce and Industry, Government of Timor-Leste |
| NGO | Non-governmental organization |
| NP | National Park |
| NT | Near threatened |
| Obj. | Objective |
| PA | Protected area |
| PMT | Planning and Management Team |
| PPP | Public-private partnership |
| SEA | Secretariat of State for, Government of Timor-Leste |
| SEAC | Secretariat of State for Art and Culture, Government of Timor-Leste |
| SMP | Sustainable Management Plan |
| UNTAET | United Nations Transitional Administration in East Timor |
| UNTL | <i>Universidade Nacional Timor Lorosa'e</i> (Timor-Leste National University) |
| USAID | United States Agency for International Development |

EXECUTIVE SUMMARY

USAID's Tourism For All Project is working to assist the Government of Timor-Leste (GOTL) to promote the nation's competitiveness as an international tourism destination while preserving its unique environmental and cultural heritage. As a part of this work, support is being provided to select protected areas (PAs) and sites of particular ecological, historical and cultural interest to establish sustainable marine tourism and sustainable management practices as exemplars for wider regions across the nation. These sites include Ataúro Island, the trail leading to the top of Mt. Ramelau and Cristo Rei.

This Sustainable Management Plan (SMP) focuses on Cristo Rei, a protected area located in the eastern suburb of Dili, and named after Cristo Rei statue of Jesus which is a key cultural feature and tourism asset of the site. This is the second SMP produced for Timor-Leste, the first being for Ataúro Island. Unlike Ataúro however, the Cristo Rei site has not been fully surveyed, and few studies are available, thus limiting the information available for the development of a fully-fledged SMP. Therefore, this SMP may be considered preliminary, supporting the work, steps and planning processes required for future refinement, and to form the basis of a future PA Management Plan.

This document begins with a 'Situational Analysis' of the Cristo Rei PA, including an overview of the site's natural and cultural assets; a description of the communities living at the site; a summary of the existing governance mechanisms supporting the management of the PA; and the current levels of development and tourism in the PA.

'Key Sustainability Challenges' to the site were identified through consultation with: government agencies (Ministry of Agriculture and Fisheries, Dili Municipal Authority, and the Cristo Rei Administrative Post); community leaders (Chefe Suco); religious leaders (from the Dili Diocese); and community representatives (including women and youths) from Suco Camea, Suco Hera and Suco Metiaut. The key challenges identified were:

- Habitat loss and destruction
- Lack of waste management
- Unclearly regulated / managed development
- Lack of PA management
- Unclear PA values and unclear boundaries

To address these challenges, five key management objectives have been identified for implementation over the coming three years (2022-2025). These objectives are to be implemented by a Planning and Management Team (PMT) comprised of representatives from: government, communities (including youth, women, and elderly representatives), the Church, local authority, national police and the state's decentralized services responsible for tourism, cultural heritage and environment (as per Article 37 of the Decree Law no. 5/2016 on the National System of Protected Areas).

The objectives aim to support the PMT to walk through the accredited process steps for developing a thorough PA management plan (as recognized by the International Union for the Conservation of Nature [IUCN]), incorporating the recommendations as emerged through the consultation process. These are as follows:

- Obj.1 Undertake further surveys related to existing socio-cultural, terrestrial and marine assets and existing land/sea use patterns in and around the PA.
- Obj.2 Identify and agree on the core values of the protected area, and the threats and opportunities facing the PA's key assets.
- Obj.3 Review and determine the boundary of the protected area and sub-zones within the PA.
- Obj.4 Determine the desired management targets for the PA and each associated sub-zone.
- Obj.5 Produce a PA Management Plan, including plans for staffing and capacity building.

Steps required to achieve each of these objectives are outlined in this document, with further sub-objectives provided for detailed implementation. These objectives aim to support the following vision statement:

“Cristo Rei PA is to become a recreation area on the fringes of Dili Capital City that can be enjoyed by locals and international visitors for its biodiversity, natural environment, and cultural sites and contribute to sustainable livelihoods of neighboring communities.”

INTRODUCTION

Cristo Rei Protected Area is located in the eastern suburb of Dili, the capital city of Democratic Republic of Timor-Leste. The protected area (PA) was named after Cristo Rei, the statue of Jesus. The statue stands on a cape protruding into the sea, while the Cristo Rei PA covers a wider area including the hills behind the statue.

The site was first designated as a PA during the Indonesian period (1975-1999). In June 2000, during the transition period following the Popular Consultation, the United Nations Transitional Administration in East Timor (UNTAET) issued Regulation no.2000/19 on Protected Places¹, designating Cristo Rei Beach and the hinterland as a 'Protected Wild Area'.

After independence, the government of Timor-Leste (GOTL) issued Decree Law no.26/2012 on Basic Environmental Law², setting up the principles of environmental policies. In 2016 this was further supported by Decree Law no.5/2016 on the National System of Protected Areas³, within which Cristo Rei was listed as one of the nation's 46 PAs.

To date, the PA is without a management plan or clear management targets. To address this, USAID's Tourism For All Project has produced this Sustainable Management Plan (SMP) for Cristo Rei PA in support of the Ministry of Agriculture and Fisheries (MAF). This is the second SMP produced for Timor-Leste (the first being for Ataúro Island). Unlike Ataúro however, the Cristo Rei site has not been fully surveyed, and few studies are available, thus limiting the information available for the development of a fully-fledged SMP. This document may therefore be considered preliminary, supporting the work, steps and planning processes required for future refinement, and to form the basis of a future PA Management Plan.

Box 1: 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.

¹ <http://www.mj.gov.tl/jornal/lawsTL/UNTAET-Law/Regulations%20English/Reg2000-19.pdf>

² http://www.mj.gov.tl/jornal/public/docs/2012/serie_I/serieI_no24.pdf

³ http://www.mj.gov.tl/jornal/public/docs/2016/serie_I/SERIE_I_NO_11.pdf

SITUATIONAL ANALYSIS

According to MAF, Cristo Rei PA was designated by GOTL without special reason, but simply succeeding the designation made during the Indonesian period (1975-1999). As a consequence, the core natural or cultural assets of this PA that led to the initial designation remain vague. Very few surveys have been conducted at the site, and little remains known about the biodiversity of the area. However, through grey literature review and stakeholder consultations, the following natural and cultural assets have been identified.

Natural Assets

Landscape

Cristo Rei PA is comprised of steep low hills covered with eucalyptus savanna woodland. While the PA does not currently include marine areas, there are limited coastal bays, including extensive shallow mudflats and sea-grass beds, limited mangrove, rock platforms and beaches. Small strands of tropical dry forest are found in gullies and on ridge tops.⁴ The topography of the area is wide-ranging, with altitudes from 0m to nearly 500m.⁵

Boundary

The surface area of Cristo Rei PA is 1,558ha⁶, however, the definitive boundary was still provisional at the time of issuing the decree law, along with other PAs in the country. The Department of Land and Property have since produced a map of Cristo Rei that provisionally defines the PA boundaries (figure 1).

Flora

Throughout the PA, tropical chestnut (*Sterculia foetida*), guttiferæ (*Callophyllum teysmanii*), and candlenut (*Aleurites moluccana*) are typically found on the lowland slopes. Palms, acacia and eucalyptus trees (particularly *Eucalyptus alba*) are found on the rocky slopes. Of these species, eucalyptus has been identified by MAF as a key species of importance in the region. This is supported by the Chefe Suco of Hera, who states that eucalyptus trees (or 'ai bubur') are an identity of Timor-Leste and should not be lost. However, the species is commonly harvested for firewood and cooking fuel by communities in and around the PA.⁷

⁴ Description based on BirdLife International (2020) Important Bird Areas factsheet: Areia Branca no Dolok Oan. <http://www.birdlife.org> (Last accessed on April 9, 2020)

⁵ Based on Google Map. <https://www.google.com/maps> (Last accessed on April 9, 2020)

⁶ According to Decree Law No.5/2016 "National System of Protected Areas". (http://www.mj.gov.tl/jornal/public/docs/2016/serie_1/SERIE_1_NO_11.pdf)

⁷ Description based on Japan International Cooperation Agency (2016) The Project for Study on Dili Urban Master Plan in the Democratic Republic of Timor-Leste: Final Report, Part I: Current Conditions. (<https://openjicareport.jica.go.jp/pdf/12268603.pdf>)

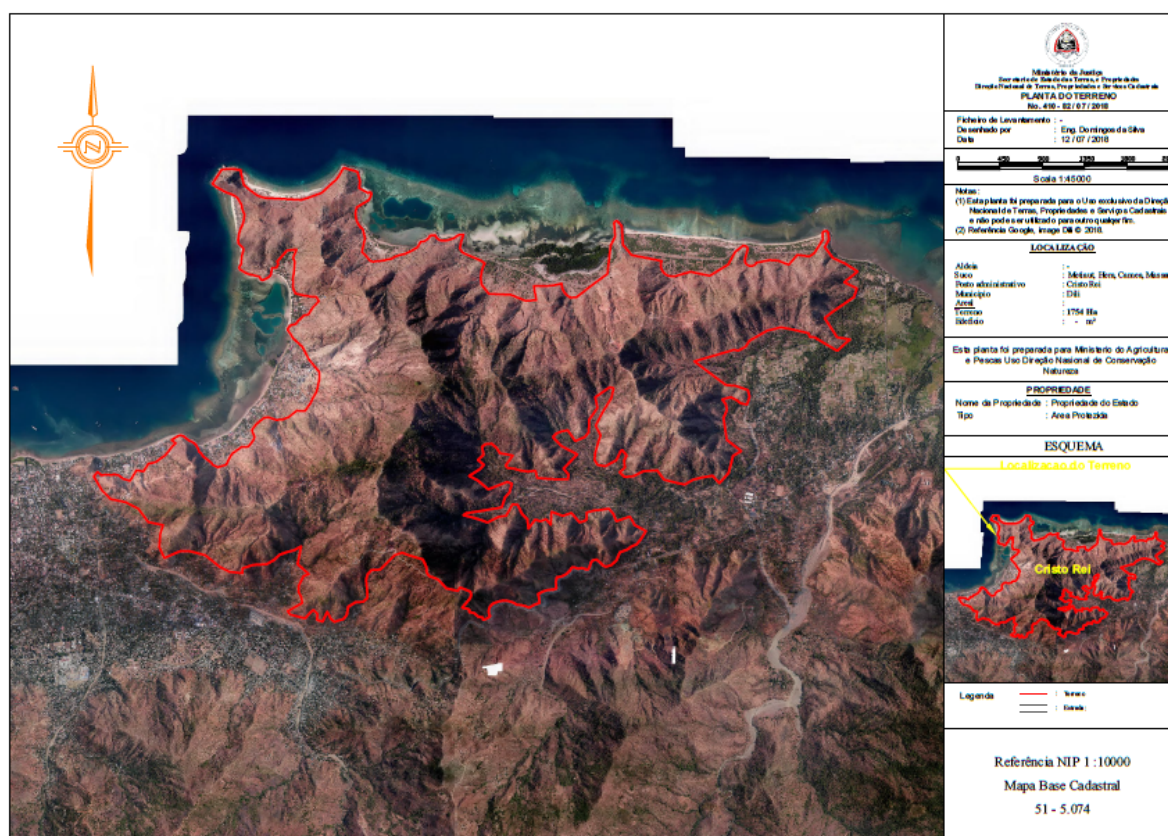


Figure 1: Map of Cristo Rei Protected Area boundary.

At the shoreline of Suco Hera there is also an area of mangroves, where six distinct species have been identified⁸, one of which is considered by the IUCN red list to be ‘near threatened’.

1. Flat-leaf spurred mangrove (*Ceriops decandra*) — a slow-growing species that can be tolerant of extreme environmental conditions, and is commonly used for fencing, boat and house construction materials. This species is Near Threatened (NT).
2. Black mangrove (*Bruguiera parviflora*) — a shade intolerant species that is slow growing, generally to a maximum height of 25 meters. It is an attractive species for timber harvesting in some parts of the world as the trunks tend to grow ‘straight’, but is less utilized in Timor-Leste.
3. Spurred mangrove (*Ceriops tagal*) — a shade intolerant species that is often harvested for fuelwood and construction. The bark of this species is also harvested for tannins to make dyes.
4. Api Api Putih (*Avicennia alba*) — often appearing in shrub form, this species tends to grow to approximately 10 meters (but can get as tall as 25 meters). It is a good colonizing species on newly formed mudflats, and is considered an important medicinal plant in many regions.
5. Blind-your-eye mangrove (*Excoecaria agallocha*) — a small to medium sized tree with extensive cable roots, this species produces a milky sap that can cause temporary blindness.

⁸ UNDP and MAF (2018) Mangrove Field Identification Manual of Timor-Leste. United Nations Development Program (UNDP) and National Directorate of Forestry, Coffee and Industrial Plants, Ministry of Agriculture and Fisheries (MAF).

6. Trumpet tree mangrove (*Dolichandrone spathacea*) — is a small, sprawling, and fast-growing tree, often harvested for boat and house construction.



Figure 2: *Ceriops decandra* is a near-threatened species of mangrove found on the edge of the Cristo Rei PA © Animesh Kar

In the intertidal and shallow sea areas adjacent to the PA, seagrass beds exist that are understood to support populations of Dugong and turtles. It is important to note however that the coastlines and adjacent marine areas of Cristo Rei are not within the formally designated boundaries of the PA, and are therefore conferred no level of protection currently beyond national laws and guidelines for resource management.

Fauna

Limited studies have been undertaken in Cristo Rei, therefore little is known of the indigenous fauna. It is anticipated the area is host to a range of species, including reptiles and small mammals. However, the only available information on fauna is from a study conducted in 2007 by BirdLife International that identified 16 Important Bird and Biodiversity Areas (IBAs) throughout Timor-Leste. This includes 'Areia Branca no Dolok Oan IBA' (2,916ha) which encompasses the entirety of Cristo Rei PA, as well as its surrounding areas.⁹ As an IBA, this region is therefore recognized as a priority site for the conservation of birds and other wildlife. The designation was made following the discovery of two key species in the area that are listed under the International Union for Conservation of Nature (IUCN)'s Red List as either Near Threatened (NT), and the finding of other species of interest, namely:¹⁰

⁹ BirdLife International (2020) Important Bird Areas factsheet: Areia Branca no Dolok Oan. <http://www.birdlife.org> (Last accessed on April 9, 2020)

¹⁰ BirdLife International (2020) Important Bird Areas factsheet: Areia Branca no Dolok Oan. <http://www.birdlife.org> (Last accessed on April 9, 2020)

- Pink-headed Imperial-pigeon (*Ducula rosacea*) (NT)
- Timor Sparrow (*Lonchura fuscata*) (NT)
- Timor Friarbird (*Philemon inornatus*)
- Streak-breasted Honeyeater (*Microptilotis reticulatus*)
- Plain Gerygone (*Gerygone inornate*)
- Timor Oriole (*Oriolus melanotis*)
- Fawn-breasted Whistler (*Pachycephala orpheus*)
- Red-chested Flowerpecker (*Dicaeum maugei*)
- Flame-breasted Sunbird (*Cinnyris solaris*)



Figure 3: The Timor Sparrow is a near-threatened species found in Cristo Rei PA © Colin Gould

There have also been unconfirmed reports of Cockatoo's and owls often seen in the region. And in terms of larger wildlife, communities have reported sightings of monkeys regularly in the area.

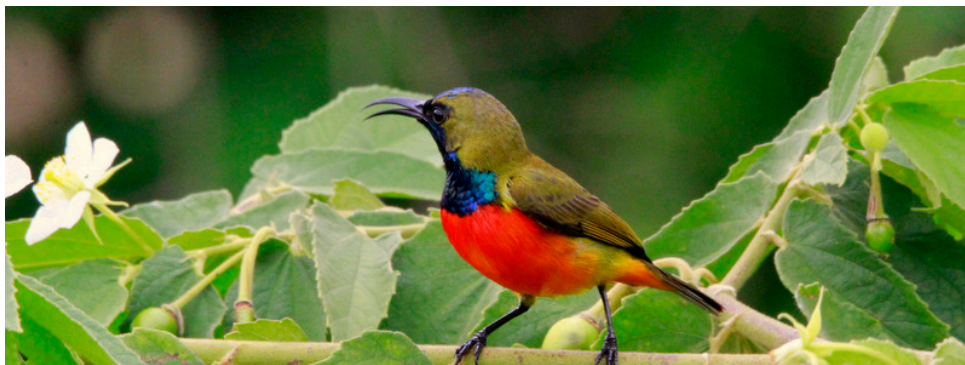


Figure 4: The flame-breasted sunbird can be found in Cristo Rei PA © Leonardus Nyoman

Offshore, the marine environment is host to coral reefs (which are animal communities) that provide important nursery grounds for local fisheries, as well as habitat for turtles, dolphins and dugong. Whales have also been observed offshore from Cristo Rei. However, surveys are lacking and the marine environment is currently not within the delineated boundaries of the PA.

Cultural Assets

Cristo Rei Statue



Figure 5: Cristo Rei of Dili status © Creative Commons

The Cristo Rei statue is the best known of all the cultural assets in the PA. 'Cristo Rei of Dili' (Christ the King of Dili) is a 27 meter-high (88.6 ft) statue of Jesus located atop a globe. The statue was designed by Mochamad Syailillah, and was officially unveiled in 1996 by President Suharto (of Indonesia), Roman Catholic Bishop Carlos Filipe Ximenes Belo, together with the East Timor Governor (at the time), José Abílio Osório Soares. The statue, and the globe on which it rests, are situated at the end of the Fatucama peninsula, facing out to the ocean and can be reached by climbing 597 steps. The statue is a main draw for visitors to the area, and is a particular focus for Catholic worshipers as well as Dili citizens.

The statue is not the only religious feature of cultural and spiritual significance for the residents within the PA, with the Chapel Grotto of Metiaut and sacred Sonora stones also revered.

Mount Kakusa

Mount Kakusa is a sacred mountain for not only the people living on the hillside of the mountain, but for the people of the entire Cristo Rei Administrative area. In the past, 'lia na'in' (traditional and cultural knowledge holders) prayed for rain as well as for their ancestors at Mount Kakusa. Still now, the summit of the mountain is not open to outsiders unless accompanied by local residents to enter the area. In addition to this, the Airoma hill has been identified as sacred by the residents of Suco Hera, as well as Mount Lakasa and Mount Bioli.

Sacred Wells

In the vicinity of Mount Kakusa, there are two water wells that still function as a water source for the residents of two aldeia (communities) in Suco Camea (Ailele Hun and Lenuc Hun) and in Suco Hera (Fatumetak), all located within the PA. The wells are considered sacred and provide a venue for harvest rituals. Natural springs in Hera (Fitun and Bemutin) are also regarded as culturally and spiritually important.

Sacred Ceremonies

Among the communities within Cristo Rei PA, the St. Santiago and St. Francisco Xavier Ceremonies are key events, important for cultural and spiritual heritage. The Tebe Dai cultural dance is also a significant activity for local societies.

Sacred Houses

There are 13 'uma lisan' (sacred houses) in Suco Camea and Manroni sacred houses in Suco Metiaut. These oftentimes have hand-carved wooden doors and serve as a portal into Timor-Leste's living culture. Each object 'has its place' in the life and history of the 'Lisan', the inner sanctum of the family. They connect present with past, and evoke protection, fertility and good fortune.



Figure 6: An 'Uma lisan' (sacred house) in Aldeia Lenuc Hun © USAID's Tourism For All Project / Shinsuke Nakamura.

The Communities of Cristo Rei

The Cristo Rei PA is located within the Cristo Rei Administrative Post, within the Dili Municipality. Its area extends over parts of four suco (villages) and 9 aldeia (communities).

Aldeia in Suco Camea:

- Ailele Hun
- Lenuc Hun

Aldeia in Suco Hera:

- Acanuno
- Ailoc Laran

Aldeia in Suco Metiaut:

- 17 de Abril
- Carungu Lau
- Fatu Cama

Aldeia in Suco Bidau Santana:

- Sagrada Familia
- Au-Hun

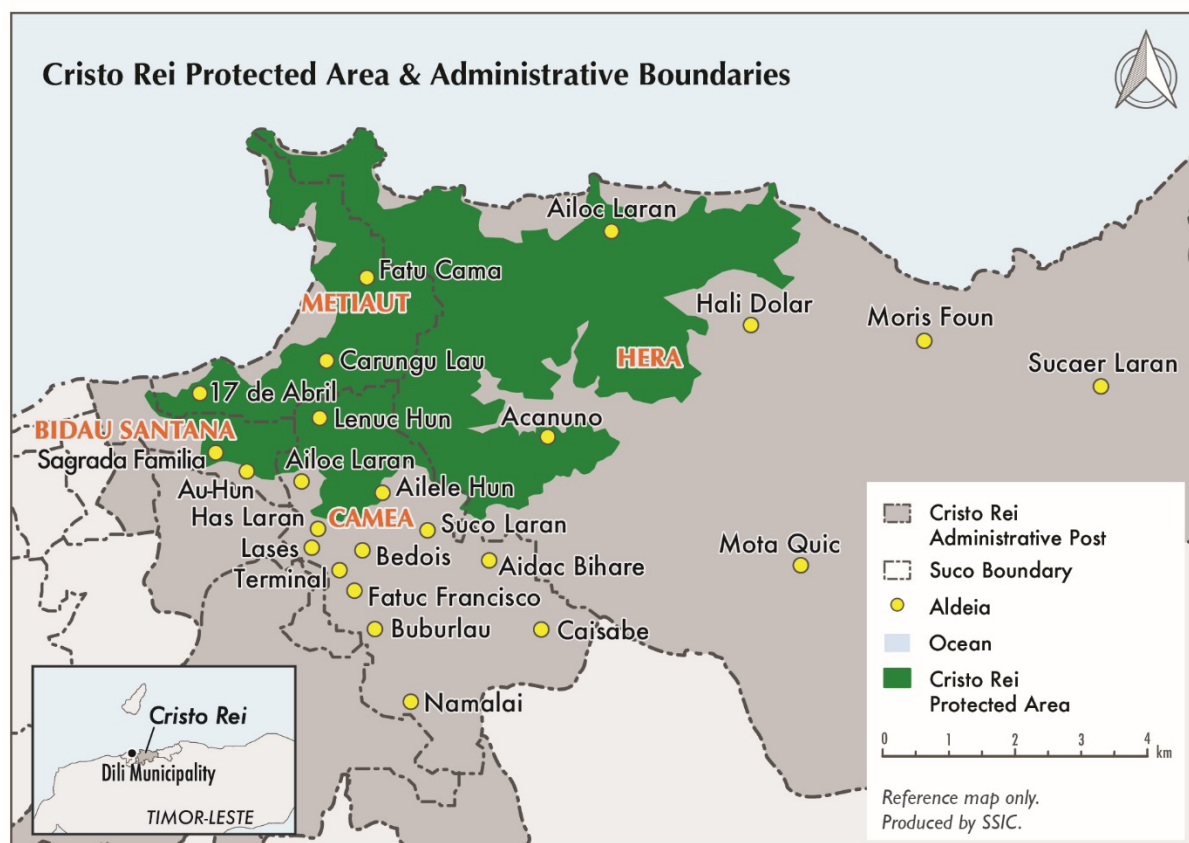


Figure 7: Cristo Rei Protected Area overlaid on the Cristo Rei Administrative Boundary, with associated Suco and Aldeia.

While the region was considered to be sparsely populated during the Indonesian period (1975-1999), some regions – such as Ailele Hun and Lenuc Hun – claim long ancestral connection to the area. Through migration over recent decades the population has increased, with Suco Metiaut being relatively new and separated from Camea during the Indonesian period.

Local residents commonly collect firewood in the area and some farming activities take place, particularly the growing of corn. With its location within relatively easy commute of Dili some residents also travel for work in and around the capital.

According to GOTL officials, the land of Cristo Rei PA solely belongs to the state. While residents recognize the legality of state ownership, they consider the communities to be ‘cultural’ owners of the area.

The famous Cristo Rei statue is located on the border of Metiaut and Hera, and both suco are blessed with white beaches that are popular tourist attractions (but are not currently within the boundary of the PA).

Governance of Cristo Rei

Cristo Rei PA is situated within the Cristo Rei Administrative Post, which covers a larger area (8 suco’s and 51 aldeia in total).¹¹

There are several government entities concerned with governance in Cristo Rei PA.

- MAF is the principle ministry in charge of all PAs in Timor-Leste, including Cristo Rei PA.
- Dili Municipal Authority and Cristo Rei Administrative Post, are the local authorities for Cristo Rei, and are both under the Ministry of State Administration.

In addition to the above, various agencies are involved in the governance of tourism, environment, land-use and culture in Cristo Rei PA, including:

- Ministry of Tourism, Commerce and Industry (MTCI),
- Secretariat of State for Environment (SEA) under the Office of the Minister Coordinator for Economic Affairs,
- Secretariat of State for Land and Property under Ministry of Justice, and
- Secretariat of State for Art and Culture (SEAC) under Ministry of Higher Education, Science and Culture.

Apart from the aforementioned governmental bodies, the Catholic Church through the Dili Diocese is an important stakeholder, particularly concerning the Cristo Rei statue. The ‘Sede Suco’ (village

¹¹ <http://statistics.gov.tl/wp-content/uploads/2018/01/Dili-em-Numeros-2016.pdf>

office) of Camea, Hera and Metiaut are essential as the representatives of local residents. Other key stakeholders include private sector actors active in the region; hotels and restaurants in the PAs vicinity as well as Dili Development Company, Lda. (Jape Group).

At the time of writing the PA has no designated management authority or on-site staffing.

Development and Tourism in Cristo Rei

Given the area's convenient access from Dili city center and the international airport, the PA has enormous potential for tourism development within driving distance of the capital. Some tourist facilities have already been established by the government around the Cristo Rei statue. The beaches adjacent to the PA are also used intensively by Dili citizens and expatriates for recreation. Many hotels and restaurants have been built along the beachside, particularly in Metiaut (which is nestled on the border of the PA enroute to the statue). The beach directly behind the statue – commonly known as Back Beach – is also a popular hangout for local residents.

However, much of this potential is not yet optimized. Mount Kakusa and its associated cultural assets have development potential for community-based tourism. 'Uma lisan' or the sacred houses, are key icons of Timorese traditional culture, however, the vast majority of them are located in rural areas within the PA where it is more challenging for foreign tourists to access due to poor road conditions. Together with the fabulous view of the city of Dili and the ocean in front of the area, these cultural sites have high potential for supporting community-based tourism, such as half-day traditional tour excursions within close vicinity of the capital city. This could bring much needed income to local communities possibly mitigating their reliance on the collection and sales of firewood. USAID's Tourism For All Project is working with local communities to curate tour experiences.

In the near-term, two key tourism-related development initiatives are underway for the area:

- the Cristo Rei re-development and investment plan (box 2), and
- the Pacific Resort Development by Jape Group (box 3).



Figure 8: View from Cristo Rei towards the city of Dili and the ocean © USAID's Tourism For All Project / Josefina C de Araujo

Box 2: Cristo Rei re-development and investment plan

Under development through the USAID's Tourism For All Project in public private partnership (PPP) with the Dili Municipal Government, the Ministry of Finance (PPP Unit) and the Ministry of Tourism, Commerce and Industry, Government of Timor-Leste (MTCI) and the Church.

This plan is intended to revitalize Cristo Rei as a site of enormous economic, social, religious, and commercial potential. A rehabilitated site will create a landmark tourist destination and iconic national attraction. Moreover, it will improve quality of life for Dili residents with new leisure, community, and recreational facilities on offer.

The plan outlines a blended finance framework through public-private partnership (PPP) that leverages concessional finance from multilateral development banks, development finance institutions, philanthropic capital, senior commercial debt, and shareholder equity. The development would be targeted towards small-scale PPP projects as a collective, to leverage greater impact, and optimize engagement of civil society, reduce economic leakage and promote local entrepreneurship. Investments and projects would be required to meet environmental and social sustainability criteria.

Box 3: Pacific Resort Development by Jape Group

Dili Development Company

This private sector company (which also owns and operates the Timor Plaza Mall in Dili), has acquired and holds a concession for large swathes of property in Hera, within the PA, with the intention to develop a commercially integrated tourist resort. The company envisions tourism development activities along some of the most pristine beaches and hills around Cristo Rei PA, and plans include a beach resort, mangrove park, golf course, residential district and new town.

While the development is still in the early stages of planning, some construction of fencing and roads has begun that is causing erosion of the land and damage to the beaches and oceans. This is causing tension with local communities and concern amongst wider society and development partners. It also appears to contravene the Dili Urban Master Plan, where it is clearly stated that such developments “require a thorough environment impact assessment with appropriate mitigation measures or alternatively that the protected area boundary be changed in case of unchangeable development”.

Japan International Cooperation Agency (2016) The Project for Study on Dili Urban Master Plan in the Democratic Republic of Timor-Leste: Final Report, Part I: Current Conditions. (<https://openjicareport.jica.go.jp/pdf/12268603.pdf>)



Figure 9: A screenshot of the planned developments from Jape Group International © Jape video

KEY SUSTAINABILITY CHALLENGES IN CRISTO REI

In order to advance the sustainable development of Cristo Rei, it is important to identify the current challenges to sustainability. This section describes the challenges identified through a combination of community consultations and key informant interviews (annex one).

These challenges include (but are not limited to):

- Habitat loss and destruction
- Lack of waste management
- Unclearly regulated / managed development
- Lack of PA management
- Unclear PA values and unclear boundaries

Habitat Loss and Destruction

All stakeholders consulted had a high-level consensus that habitat loss and destruction is a paramount challenge in Cristo Rei. This includes both terrestrial habitat within the existing PA boundaries, and marine habitat currently adjacent to the boundary.

Terrestrial

The Chefe Suco interviewed stated that during the Indonesian period, many trees were cut down to avoid Timorese guerrillas fighting against the Indonesian government from hiding in the forests. However, eucalyptus trees ('ai bubur') were restricted for cutting, since the Indonesian government at the time considered those trees as their resources. Today, most tree cutting is caused by:

- slash and burn agricultural practices (to clear the land for the planting of food species),
- felling of palm and sagu trees for selling, or
- felling for the collection of firewood (for personal use and for sale).

The latter of these (felling for firewood) appears to be a dominant cause of deforestation in the area, with eucalyptus trees targeted as a preferred variety. Firewood collection is an important local livelihood, and much of the harvest is sold to Dili residents. According to the Timor-Leste Population and Housing Census 2015, 47% (19,978 out of 42,485) of the private households in the whole Dili Municipality still use wood as a main source of energy for cooking,¹² making this commodity essential. However, with little ecological surveying or understanding of habitat status within Cristo Rei, it is currently not clear whether such practices are sustainable; though concern is high amongst stakeholders that current levels of extraction are unlikely to be sustainable long-term.

¹² <http://www.statistics.gov.tl/category/publications/census-publications/> and www.statistics.gov.tl/wp-content/uploads/2016/11/16_2015-V4-Household-amenities_cooking-fuel.xls

Concern has also been expressed that as habitat dwindles, trees around sacred sites are now being targeted, with many concerned that this shows a lack of respect for the areas cultural and spiritual heritage.

Marine

Stakeholders also noted that marine habitat had become increasingly degraded in recent years. This is thought to have been caused by a range of factors.

- Upland deforestation has led to unstable soils which are being washed out to sea, causing coastal sedimentation and smothering of reefs.
- Mangroves are being felled by communities for use in construction and other purposes, further exacerbating the erosion of the coastline, and failing to trap land-based sediment before it enters the ocean.
- Likewise, seagrass fields have been uprooted by anchoring and other activities, that again exacerbates the levels of sedimentation entering the marine environment.
- Coral reefs have also been directly damaged or destroyed by local fishermen, through anchoring, the dragging of nets, or extraction for use in weighing traps or building materials.

Damage to both the terrestrial and marine environments is also being caused by a lack of waste management and unclearly regulated development activities.

Socio-cultural

Communities in Cristo Rei PA expressed considerable concern for the lack of management and degradation of cultural assets in the area. This includes the erosion of socio-cultural values and traditions caused by a lack of awareness amongst visitors, as well physical degradation to culturally important areas (the hillside regions, sacred well areas, the Cristo Rei statue and other features frequented by tourists) where there is a perceived lack of respect as evidenced through damage to the sites and littering.

Lack of Waste Management

Communities throughout Cristo Rei PA note that there is a lack of waste management facilities and processes; for domestic, business and visitor purposes.

- Domestic waste — often ends up in the landscape, where it has been identified as a threat to birdlife¹³, and through run-off can end up as marine debris and pollution.
- Business waste — from the various enterprises, particularly along the coastline and around the statue, can also end up in the landscape, causing similar problems as above. Furthermore,

¹³ BirdLife International (2020) Important Bird Areas factsheet: Areia Branca no Dolok Oan. <http://www.birdlife.org> (Last accessed on April 9, 2020)

several coastal enterprises appear to be depositing both solid (rubbish) and liquid (sewage) waste directly into the marine environment.

- Tourism waste — compounds the above problems, with a lack of rubbish bins or waste facilities provided at key visitor destinations further exacerbating the issue.

Stakeholders also cite a lack of community awareness around the topic of waste, as evidenced by old, unused and damaged fishing nets and boats left derelict along various beaches.

Unclearly Regulated / Managed Development



Figure 10: Small road construction is on-going on the slope of the hills inside the protected area © USAID's Tourism For All Project / Josefina C de Araujo.

Concern was raised by various stakeholders about the Jape development, which has been accused by some as already destroying sacred / cultural sites. Furthermore, initial road development has been initiated by the group, within the PA, without apparent consultation with communities, and without planning as part of the PA management.

Indeed, consideration of the area as a PA does not appear to have been factored into the Jape's plans,

and the legally required environmental impact assessments are either unavailable or inaccessible. Stakeholders are unclear about the subsequent stages of the proposed development and there is concern as to the appropriateness of their plans.

Other concerns point to a lack of management over development, with various sites considered important by local communities being left abandoned or uncared for, including the Bemanana Hot Spring and the old Portuguese prison and residence. These issues of abandonment and lack of management are fueled by some level of confusion over who is responsible for sites (as discussed in the next section).

There are also concerns over the socio-cultural impact of development in the PA, particularly with regards to tourism visitors who may be uninformed about local cultural values. Communities are apprehensive about the impact visitors will have on their traditional values, accepted levels of attire, and the erosion of the local languages and dialects (which have already been cited as decreasing in common use).

Finally, the potential scaling up of development in Cristo Rei is exacerbating issues related to water management, namely: (i) water scarcity (as clean potable water is already lacking for local communities, and will be further unsustainably extracted for any business developments); and (ii) lack of drainage (as current infrastructure is without adequate drainage and channeling / capturing of water during heavy rains, placing community homes at risk).

Lack of PA Management

Many of the above challenges link directly to the observed lack of PA management. Legislation for management of PAs exists in Timor-Leste, under the Decree Law no.5/2016 on the National System of Protected Areas, however there is lack of clarity over several aspects of legislative implementation.

Management planning

Article 23 of the decree law states that a management plan for a PA should be drawn up and be approved by GOTL. To date however, only one PA in Timor-Leste has a completed management plan (with two further sites in progress) and none has yet been signed into law. Cristo Rei PA has yet to have a management plan prepared, and this will be an essential next step for the PA to holistically address many of the challenges identified.

In the absence of a thorough PA management plan, the PA remains without a dedicated management unit or specific staffing. Meanwhile MAF frequently receives aid proposals to support environmental initiatives (including PA support) from various development partners, but these cannot be harmonized and lack any holistic strategy to position each one of them into the larger mosaic of a PA's goals. For the Cristo Rei site particularly, management planning will also need to address critical issues of: (i) the values of the PA (box 4), and (ii) the boundaries of the PA (box 5).

Clarity over roles and responsibilities

The lack of a clear management body for the PA has led to confusion amongst stakeholders with regards to the roles and responsibilities over management. For a site such as Cristo Rei (like most PA's) collaborative management through multi-stakeholder engagement and coordination is critical; with definitive duties and expectations agreed between all parties.

Some coordinated activities have been successful in Cristo Rei, such as the harmonization of tree planting activities conducted by MAF and SEA through support from the Administrative Post. However, even in such instances of apparent conservation achievements, the lack of scientific understanding and strategic planning for the PA has resulted in accidental introduction of non-indigenous species (an action that would normally be avoided in any PA)¹⁴.

This issue of coordination and clarity over roles and responsibilities is vital for the future of the PA. While MAF is the overarching agency responsible for PA management in-country, it does not necessarily feel it has clear authority to influence or exert management measures over businesses

¹⁴ As a response to concerns over deforestation in Cristo Rei, various bodies (MAF, SEA, Dili Municipal Authority, as well as the local communities) have conducted tree planting activities over recent years. However, upon examination it was found that many of the species planted were non-indigenous, and therefore both (a) unable to appropriately sustain themselves in the environment, and (b) unable to support the indigenous fauna and ecological systems of the natural environment within the PA.

operating in the area or residential rights. Meanwhile the Cristo Rei Administrative Post relies of MAF as the central management authority over the PA, and does not feel empowered to enact management measures until clear instruction is provided. The Chefe Suco of the communities likewise state they feel unempowered, and the Dili Diocese has called for clarification of responsibilities on several occasions to support parishioners across the region.

Box 4: The values of Cristo Rei PA

As the PA was designated without specific attribution of values, an essential first-step in PA management planning will be to answer the questions “what makes this area special?” and “why should it be protected?”

The Cristo Rei statue is undoubtedly a unique cultural icon in the PA (and the country), and work undertaken for the development of this SMP has identified further natural and cultural assets of the PA (as outlined in the situation analysis). However, while these assets may be recognized, they do not yet provide a clear, agreed upon “core value” for the PA; and at the time of writing there is no common understanding of why Cristo Rei PA needs to be protected.

Furthermore, clarification is needed on the impact the PA designation has (or will have once enacted) on the local people living within the PA boundaries. During consultations, MAF expressed the desire to have PAs without inhabitants, suggesting that the settlements within the PA are illegal and should be removed due to the PA designation. However, under Decree Law no.5/2016 on the National System of Protected Areas, habitation within PAs appears to be legally acceptable, as per article 33 on allowable activities which specifically mentions the allowance of ‘subsistence farming in home gardens’, which by default suggests the permittance of ‘homes’ where they are ‘recognized as such by the community and traditional leaders’(33[c]).

To date, many (if not most) of the country’s designated PAs include settlements and agricultural lands, and it will be important for MAF to ensure clarity around the inclusion or exclusion of inhabitants, recognizing the social, economic and cultural impact this could have on many poor populations across the country, and likely tailored to particular sites and circumstances.

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Figure 11: Aldeia Lenuc Hun residents claim ancestral connection to the land inside the PA © USAID’s Tourism For All Project / Tarcizio F Guterres



Figure 12: White beach on east side of Cristo Rei statue provides an important natural area for biodiversity and recreation © Shinsuke Nakamura

¹⁵ Note: the modus operandi of inhabitant inclusion varies between nations. For example, the United States of America (USA) and Canada generally exclude inhabitants from PAs; while in the United Kingdom, Japan and Indonesia the inclusion of inhabitants within PA boundaries is common. This latter approach to accepting some level of habitation and resource-use within PAs is not without challenge however; and only in countries where strict management is viable working alongside the local communities have PAs managed to be effective for both people and nature.

Box 5: The boundaries of Cristo Rei PA

Various issues have been identified regarding both the outer boundary of the PA and internal divisional boundaries. Internally, the boundaries between the Suco are not well defined, and this has led to some level of conflict between communities. Additionally, the land-use rights and status remain contentious topics in some areas, with communities unclear of the impact PA designation has on land holdings (while recognizing state has ultimate ownership).

The PA outer boundary has also caused some concern. The current outer boundary has been delineated carefully to exclude residential areas in Suco Metiaut and Hera, as well as the new campus of Universidade Nacional Timor Lorosa'e (Timor-Leste National University) in Suco Hera and some of the development sites of the hotels and restaurants along the coast. However, such delineation (whilst understandable from the perspective of avoiding human/PA conflict) serves to also exclude key areas of coastline with important mangrove and beach habitats. The PA also does not currently include any marine waters, despite the area being known for its seagrass beds and coral reefs.

VISION STATEMENT, MANAGEMENT OBJECTIVES AND TARGETS

Through consultations and discussions with a range of stakeholders, the vision statement for the Cristo Rei PA has been developed as follows:

“Cristo Rei PA is to become a recreation area on the fringes of Dili Capital City that can be enjoyed by locals and international visitors for its biodiversity, natural environment, and cultural sites and contribute to sustainable livelihoods of neighboring communities.”

The following management objectives and targets aim to provide a clear pathway forward over the coming three years to achieve this vision. The objectives provide a step-wise process for developing a full PA management plan, while concurrently addressing immediate term concerns (and capitalizing on opportunities) to tackle the challenges identified in the previous section.

Objectives related to both terrestrial and socio-cultural considerations have been amalgamated in this SMP, as these early management steps need to be taken holistically. In addition to this, while the PA is officially (currently) landlocked, and not inclusive of the coastal environment, the level of concerns raised during consultations about the adjacent marine environment have led to the inclusion of marine and coastal considerations in the management targets.

To achieve these objectives, a pre-requisite step will be the establishment of a common platform, bringing together and engaging all relevant stakeholders. This will be essential in underpinning all of the following objectives, in order to formulate consensus, and realize the vision of the site. This platform can be established to work through the following objectives, and could later be transformed into the PA management committee, as defined in the Decree Law No.5/2016 on the National System of Protected Areas (box 6), and to help coordinate the different interests of various stakeholders, as well as distribute roles and responsibilities among them.

Box 6: Planning and Management Team

The decree law, in Article 37, defines composition of a PA management committee as follows:

- | | |
|--|---|
| <ul style="list-style-type: none">• governmental body responsible for PAs (secretariat of the committee)• 'lia na'in'• youth representative• women representative• elderly representative• religious leader• local authorities• national police | <ul style="list-style-type: none">• Special Administrative Region of Oé-Cusse Ambeno, whenever the area overlaps wholly or partially with Special Zones of Social Market Economy of Timor-Leste• state's decentralized services responsible for tourism, cultural heritage and environment• any other member determined by the government |
|--|---|

In terms of implementing the below objectives, this committee is referred to as the “planning and management team” (PMT)

| Management Objectives | | Targets | Year |
|--|---|---|------|
| Obj.1 | Building on the information available (as identified in this SMP) undertake further surveys of the PA to fill the gaps in knowledge related to existing socio-cultural, terrestrial and marine assets and existing land/sea use patterns. | Full information available on the assets of the PA | 1 |
| | | | 2 |
| | | | 3 |
| <p>While the collation of information provided, this SMP goes some way to identifying and documenting the natural, cultural and historic assets of the Cristo Rei PA. However, further work is needed to fill the gaps in knowledge. This includes the following:¹⁶</p> <ul style="list-style-type: none">• Biophysical ecological surveys and mapping of the PA terrestrial landscape (biodiversity of flora and fauna, ecosystem services, and geological characteristics)• Biophysical ecological surveys and mapping of the neighboring marine and coastal landscape (biodiversity and ecosystem services of intertidal, mangroves, seagrass and coral reef habitats)• Governance surveys (including community tenure, local governance frameworks, stakeholder mapping and understanding cultural governance systems)• Socio-cultural surveys and mapping of the historical, spiritual and cultural assets (man-made and natural) occurring within the PA.• Socio-economic surveys and mapping of livelihoods, land-use / sea-use systems and economic / livelihood dependencies within the PA <p>The surveys should document both the status and threats to the above PA assets and dependencies. This will be important to enable the following objectives to be accomplished.</p> | | | |
| Obj.2 | Identify and agree on the core values of the protected area, and the threats and opportunities facing the PA's key assets. | Core values, assets, and threats to assets are understood and agreed by all key stakeholders. | 1 |
| | | | 2 |
| | | | 3 |
| <p>Using the results of the above surveys and assessments, the PMT can work to agree on the core values of the PA. This should articulate:</p> <ul style="list-style-type: none">• What makes Cristo Rei PA special?• What are the key natural and cultural assets in Cristo Rei PA and why are they important?• Who are the beneficiaries of those assets?• What are the key threats to those assets? <p>The identification of these values needs to be consultative and engage all key stakeholders (as identified in the objective 1 stakeholder mapping process). This is particularly important in Cristo Rei, as presently key stakeholders have different visions and disparate views that need to become more unified.</p> | | | |
| Obj.3 | Review and determine the boundary of the protected area and sub-zones within the PA | PA boundary and zoning plan is finalized | 1 |
| | | | 2 |
| | | | 3 |
| <p>This objective is further divided into the following sub-objectives.</p> | | | |

¹⁶ Where possible / appropriate, the PMT may consider recruiting / involving local university students and / or development partners with experience in such types of survey work. For example, partners such as Conservation International have experience in terrestrial landscape surveying and mapping; Blue Ventures have experience in marine landscape surveying and mapping; Permatil has experience in agro-use surveying and mapping; and Sustainable Solutions Timor-Leste have experience in socio-cultural, historical and socio-economic surveying and mapping.

| Management Objectives | | Targets | Year | | |
|--|--|---------|------|---|--|
| Sub-Obj.3.1 | Clarify, refine and define the PA Boundary | | 1 | | |
| | | | 2 | | |
| | | | 3 | | |
| <p>Using the outputs of objectives 1 and 2, the PMT can review and assess the existing boundary of the PA, to determine whether:</p> <ul style="list-style-type: none">(a) the existing boundary effectively captures all of the identified core values and assets of the PA, or(b) the existing boundary should be adjusted. <p>From the consultations conducted through this SMP work, it is anticipated that some adjustment / minor expansion in the PA boundary may be considered, to ensure the PA incorporates the marine and coastal natural assets identified by communities and wider stakeholders as essential elements of the regions’ heritage.</p> <p>For this sub-objective, the PMT will need to draw upon the results of the surveys and assessments (conducted under objective 1), as well as other existing administrative maps, road maps, cadastral maps, aerial photos etc. wherever available. The PMT should also consider that the boundary should <u>enable the conducting of legally ‘allowable activities’</u> and should <u>enable the cessation of legally ‘prohibited activities’</u> as outlined in the Decree Law no.5/2016 on the National System of Protected Areas.</p> <table><tr><td><p>Allowable Activities in PAs (Section IV, Article 33)</p><p>(a) subsistence hunting of unprotected species;</p><p>(b) subsistence fishing for unprotected species;</p><p>(c) subsistence farming in home gardens recognized as such by the leader’s community and traditional</p><p>(d) cutting and removal of unprotected wood; only from land less than 1,500 meters altitude and has a slope of less than 25%, for family subsistence and other uses domestic, traditional or cultural, building traditional houses and construction of religious buildings;</p><p>(e) Commercial photography and recording activities, in any format, including film and video;</p><p>(f) Expeditions for tourism purposes;</p><p>(g) Expeditions for scientific research and education purposes.</p></td><td><p>Prohibited Activities in PAs (Section IV, Article 34)</p><p>(a) directly or indirectly introduce pollutants of any kind type in any form or dispose of waste of any kind nature by extraction or excavation;</p><p>(b) Burn or perform any other destruction activity of forest;</p><p>(c) Cut, burn, uproot or harvest protected flora;</p><p>(d) Introduce invasive alien species of flora or fauna;</p><p>(e) hunt or fish for wild species or perform any other activity that interferes with its development, reproduction or migration;</p><p>(f) Use firearms, explosives, toxic substances or any other harmful methods of fauna and flora;</p><p>(g) Extract, excavate or perform any other activities related to the commercial exploitation of non-renewable resources;</p><p>(h) Burn or perform any other destruction activity of pastures;</p><p>(i) spoil, deface or destroy natural property, historic, cultural or artistic or remove integral objects of the same;</p><p>(j) Destroy protected area infrastructure, including roads and ways;</p><p>(k) alter, remove, destroy or eliminate marks or signs of border or any signs or markers placed, for management purposes outside or inside the area protected;</p><p>(l) Any other activity determined in the management plan or, reasonably, determined by own diploma Government member responsible for protected areas.</p></td></tr></table> <p>Work under this sub-objective should also recognize the existence of the communities living within the PA boundaries, and respect their rights to abode; with clarity provided in any refined boundary definition of the acceptance of these societies as integral to the human-nature landscape of the PA.</p> | | | | <p>Allowable Activities in PAs (Section IV, Article 33)</p> <p>(a) subsistence hunting of unprotected species;</p> <p>(b) subsistence fishing for unprotected species;</p> <p>(c) subsistence farming in home gardens recognized as such by the leader’s community and traditional</p> <p>(d) cutting and removal of unprotected wood; only from land less than 1,500 meters altitude and has a slope of less than 25%, for family subsistence and other uses domestic, traditional or cultural, building traditional houses and construction of religious buildings;</p> <p>(e) Commercial photography and recording activities, in any format, including film and video;</p> <p>(f) Expeditions for tourism purposes;</p> <p>(g) Expeditions for scientific research and education purposes.</p> | <p>Prohibited Activities in PAs (Section IV, Article 34)</p> <p>(a) directly or indirectly introduce pollutants of any kind type in any form or dispose of waste of any kind nature by extraction or excavation;</p> <p>(b) Burn or perform any other destruction activity of forest;</p> <p>(c) Cut, burn, uproot or harvest protected flora;</p> <p>(d) Introduce invasive alien species of flora or fauna;</p> <p>(e) hunt or fish for wild species or perform any other activity that interferes with its development, reproduction or migration;</p> <p>(f) Use firearms, explosives, toxic substances or any other harmful methods of fauna and flora;</p> <p>(g) Extract, excavate or perform any other activities related to the commercial exploitation of non-renewable resources;</p> <p>(h) Burn or perform any other destruction activity of pastures;</p> <p>(i) spoil, deface or destroy natural property, historic, cultural or artistic or remove integral objects of the same;</p> <p>(j) Destroy protected area infrastructure, including roads and ways;</p> <p>(k) alter, remove, destroy or eliminate marks or signs of border or any signs or markers placed, for management purposes outside or inside the area protected;</p> <p>(l) Any other activity determined in the management plan or, reasonably, determined by own diploma Government member responsible for protected areas.</p> |
| <p>Allowable Activities in PAs (Section IV, Article 33)</p> <p>(a) subsistence hunting of unprotected species;</p> <p>(b) subsistence fishing for unprotected species;</p> <p>(c) subsistence farming in home gardens recognized as such by the leader’s community and traditional</p> <p>(d) cutting and removal of unprotected wood; only from land less than 1,500 meters altitude and has a slope of less than 25%, for family subsistence and other uses domestic, traditional or cultural, building traditional houses and construction of religious buildings;</p> <p>(e) Commercial photography and recording activities, in any format, including film and video;</p> <p>(f) Expeditions for tourism purposes;</p> <p>(g) Expeditions for scientific research and education purposes.</p> | <p>Prohibited Activities in PAs (Section IV, Article 34)</p> <p>(a) directly or indirectly introduce pollutants of any kind type in any form or dispose of waste of any kind nature by extraction or excavation;</p> <p>(b) Burn or perform any other destruction activity of forest;</p> <p>(c) Cut, burn, uproot or harvest protected flora;</p> <p>(d) Introduce invasive alien species of flora or fauna;</p> <p>(e) hunt or fish for wild species or perform any other activity that interferes with its development, reproduction or migration;</p> <p>(f) Use firearms, explosives, toxic substances or any other harmful methods of fauna and flora;</p> <p>(g) Extract, excavate or perform any other activities related to the commercial exploitation of non-renewable resources;</p> <p>(h) Burn or perform any other destruction activity of pastures;</p> <p>(i) spoil, deface or destroy natural property, historic, cultural or artistic or remove integral objects of the same;</p> <p>(j) Destroy protected area infrastructure, including roads and ways;</p> <p>(k) alter, remove, destroy or eliminate marks or signs of border or any signs or markers placed, for management purposes outside or inside the area protected;</p> <p>(l) Any other activity determined in the management plan or, reasonably, determined by own diploma Government member responsible for protected areas.</p> | | | | |

| Management Objectives | | Targets | Year |
|--|--|---------|------|
| Sub-Obj.3.2 | Develop and demarcate PA zones to support effective management | | 1 |
| | | | 2 |
| | | | 3 |
| <p>Once the outer boundary of the PA has undergone any revision / is clarified / determined, the PMT can start to designation zones within the PA.</p> <p>Under the Decree Law no.5/2016 on the National System of Protected Areas, three types of zones can be designated within a PA (Section III, Article 32): (1) Restricted access zones, (2) Buffer zones, and (3) Areas of use.</p> <p>(1) Restricted access zones — “for the preservation of the area without human interference, where the use of resources is not allowed.” (III, 32[a])</p> <p>To identify these zones, the PMT need to consider the core values of the PA and the assets that are most important (in terms of natural heritage and ecosystem services) to preserve and protect. This may include, for example, water catchment areas where zero cutting or felling of trees should be permitted in order to maintain hillsides, reduce sediment run-off into neighboring areas/ the coastal plain, and enhance water catchment services to improve groundwater reservoirs.</p> <p>Importantly, this zone designates areas that should experience ‘<u>no human interference</u>’, which may mean physical access to these zones is limited/ not permitted. Such designations should be identified with full PMT involvement, particularly with local communities. The protection of these zones may be further enhanced where relevant by the concurrent designation for protection under local customary systems, such as <i>tara bandu</i> (see box on following page).</p> <p>(2) Buffer zones — “intended to support the conservation of restricted access zones, where the resource management and human activities are subject to specific rules and restrictions.” (III, 32[b])</p> <p>These zones will allow some level of access and utilization, but under strict conditions. Sites appropriate for designation under this zone classification may include:</p> <p>areas proximal to ‘restricted access zones’ (to limit movement, or nearby degradation impacting the core zones for protection)</p> <p>areas of cultural or religious importance (where activities may be limited to only those deemed culturally appropriate). This may include sites of high tourism value, such as the Cristo Rei statue area, where access to tourists is permitted, but certain behaviors are required of visitors, such as dress code, not leaving trash, etc.)</p> <p>Buffer zone designations can again benefit from having concurrent designation for sustainable management under local customary systems, such as <i>lisuk</i>, <i>fatin lulik</i>, <i>lisan</i> or <i>tara bandu</i> (see box on following page).</p> <p>(3) Areas of use — “where the construction of access and management support infrastructure in the area, installation of services for human use and where natural resources may be used in accordance with management instruments.” (III, 32[c])</p> <p>These zones would designate the areas of human habitation and approved development areas within the PA. To appropriately designate these areas, the PMT need to work closely with local communities to identify and delineate the boundaries between suco / aldeia areas, and the customary tenure prevalent within and between societies in the PA.</p> | | | |

Box 7: Traditional natural and cultural preservation systems in Timor-Leste

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.

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.

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.

Mills, D., Tilley, A. and M. Pereira (2019). Exploring options to improve livelihoods and resource management in Timor-Leste's coastal communities. Australian Center for International Agricultural Research. ISBN: 978-1-925747-22-5; Quintas, J. F. D. (2016). Sustainable tourism and alternative livelihood development on Ataúro island, Timor-Leste, through pro-poor, community-based ecotourism. Master by Research, Charles Darwin University.

Management objectives continued

| Management Objectives | | Targets | Year |
|--|---|--|------|
| Obj.4 | Determine the desired management targets for the PA and each associated sub-zone. | The PA and each sub-zone have 'SMART' management targets and associated indicators to measure success. | 1 |
| | | | 2 |
| | | | 3 |
| <p>For the PA as a whole (within the boundaries identified in objective 3.1), and for the specific zones (identified under objective 3.2), the PMT will need to set specific, measurable, achievable, realistic and time-bound (SMART) management targets, and develop indicators that can be measured to show whether those targets are being successfully implemented / achieved over time.</p> <p>In the process of developing this SMP, stakeholders have already identified some priority considerations for PA management targets; and these are presented as follows.</p> | | | |
| Sub-Obj.4.1 | Establish local cultural systems to address deforestation. | | 1 |
| | | | 2 |
| | | | 3 |
| <p>As mentioned in objective 3.2 and box 6, for some 'restricted access' and 'buffer zones' in the PA, it may be propitious to work alongside the relevant local and cultural leaders (with a connection to those areas) to produce associated customary laws to regulate the limited access or limited use expectations for their specific areas.</p> <p>Traditional designations, such as <i>tara bandu</i>, can complement the PAs formal zoning system to ensure communities respect and adhere to regulations, such as the restricted cutting of trees. Communities can also be involved in the collaborative management of areas once they are customarily recognized as protected under cultural frameworks. This could include:</p> <ul style="list-style-type: none">• Community members supporting active replanting or maintenance activities at a site.• Community members recruited to work with the local authority to provide ranger support for management.• Improved socialization of the conservation and preservation goals within local societies. <p>Communities in Cristo Rei also recommend the following considerations when developing management targets to reduce deforestation:</p> <ul style="list-style-type: none">• To provide signboards and markers to inform and promote awareness of the PA and zone boundaries, and to ensure all are aware of the permitted and non-permitted activities in each area.• To actively implement the re-planting of mangroves in coastal areas, and indigenous forest species inland (particularly in designated 'buffer zones').• The construction of terracing in key 'Areas of Use' (zone category 3) to avoid loss of top-soil (through run-off), reduce sedimentation reaching the coastal areas, and support improved agricultural practices. | | | |
| Sub-Obj.4.2 | Ensure water catchments are protected and potable water supply enhanced. | | 1 |
| | | | 2 |
| | | | 3 |
| <p>Water scarcity was identified as a key challenge for communities in Cristo Rei. Therefore, in the development of management targets for the PA, it will be important to consider:</p> <ul style="list-style-type: none">• Establishing strict management patrols/ regulations to ensure the preservation of water catchment areas (where they are 'Restricted Access' under category I zoning) to promote the replenishment of the water table and associated wells in Cristo Rei.• Setting management targets in collaboration with the department of Water and Sanitation Services (<i>Serviços de Água e Saneamento</i>) to ensure effective maintenance of the water tank and associated water facilities within Cristo Rei PA.• Acquiring support from government, international agencies, or private companies to establish an improved water system for the region. | | | |

| Management Objectives | | Targets | Year |
|--|--|---------|------|
| Sub-Obj.4.3 | Actively protect sites of religious and cultural importance through multi-stakeholder collaboration. | | 1 |
| | | | 2 |
| | | | 3 |
| Through the consultations, concern was raised on several occasions over the lack of control and security for religious sites in the Cristo Rei PA. Therefore, in the development of management targets for the PA, it will be important to consider: <ul style="list-style-type: none">• Setting appropriate targets for the effective management of these sites in close collaboration with the Church, local authority and local communities.• Involving local communities in security activities around religious sites.• Ensuring regular management presence at sites, and socialization of the agreed regulations amongst all key stakeholders (communities, private sector business, tourism operators, etc.).• Providing multi-language noticeboards at key religious sites to ensure full awareness to all visitors and promote respect for the sites. | | | |
| Sub-Obj.4.4 | Improve waste management infrastructure and systems. | | 1 |
| | | | 2 |
| | | | 3 |
| Concern over the lack of effective waste management systems was raised on several occasions during consultations with key stakeholders. Recommendations for management consideration include: <ul style="list-style-type: none">• Providing / installing more rubbish bins at key tourism sites.• Providing signboard information at key tourism sites to ensure visitors use the bins provided.• Ensuring rubbish collection and management systems are regular, systematic and effective.• Socializing the importance of effective waste management with all key stakeholders (communities, businesses, tourism operators etc.)• Applying a littering penalty in the Cristo Rei area In addition to this, communities have requested more public toilet facilities be provided at key visitor areas, with improved water supply for hygiene. Businesses operating within the PA need to also ensure they have appropriate waste management systems, both for rubbish, and for sewerage systems, many of which currently run directly into the environment. Regulations for septic tanks and / or appropriate sewage management systems need to be established and implemented. | | | |
| Sub-Obj.4.5 | Improve drainage systems. | | 1 |
| | | | 2 |
| | | | 3 |
| This was identified as an issue of concern following recent road constructions disturbing patterns of drainage during rainstorms. Communities have requested support from government or international agencies to ensure road and other infrastructural developments in the region do not impact drainage systems, and those already impacted are repaired accordingly. | | | |
| Sub-Obj.4.6 | Establish local cultural systems to safeguard the marine and coastal environment. | | 1 |
| | | | 2 |
| | | | 3 |
| If the PA boundaries are extended in any way to encompass the marine and coastal environment of Cristo Rei, it would be propitious to work alongside the relevant local and cultural leaders (with a connection to those areas) to produce associated customary laws to regulate the limited access or limited use expectations for their specific areas — in the same way as outlined for terrestrial areas in sub-objective 4.1. Traditional designations, such as <i>tara bandu</i> , can complement the PAs formal zoning system to ensure communities respect and adhere to regulations, such as the restricted harvesting of corals. Communities can also be involved in the collaborative management of areas once they are customarily recognized as protected under cultural frameworks. This could include: | | | |

| Management Objectives | | Targets | Year |
|--|---|---|------|
| <ul style="list-style-type: none">Community members recruited to work with the local authority to provide ranger support for management, to reduce the illegal extraction of corals, white sands, mangroves and sea stones prevalent in the area. This may be done in collaboration with the police (<i>Policia Nacional de Timor-Leste – PNTL</i>) through community-authority partnership.Improved socialization of the conservation and preservation goals within local societies.Community members supporting active replanting of mangroves and / or maintenance activities at a site. <p>Communities in Cristo Rei also recommend the following considerations when developing management targets to protect the marine and coastal environment:</p> <ul style="list-style-type: none">To provide signboards to socialize permitted and non-permitted activities to all stakeholders (communities, businesses and tourist visitors)To conduct regular monitoring and safeguarding of sites to stop illegal activities.To improve local fishers awareness on sustainable fishing practices, the preservation of marine biodiversity, and the protection of key species (turtles, dugong, whales, dolphins etc.)To work with government, international agencies or private companies to acquire improved environmentally-friendly fishing gears to reduce impact on coral reefs, seagrass beds and mangrove habitat; and to secure capacity building support to train fishers on modern, less-impactful techniques. | | | |
| Obj.5 | Produce a PA Management Plan Preparation of the draft Management Plan, including plans for staffing and capacity building | PA management plan complete and operational | 1 |
| | | | 2 |
| | | | 3 |
| <p>The outputs from all the above objectives and sub-objectives will form the basis of the Cristo Rei PA management plan.</p> <p>Article 25 of the Decree law no.5/2016 on the National System of Protected Areas, provides guidance on elements for inclusion in any PA management, which effectively reflect the stages presented in this SMP, as follows.</p> <ul style="list-style-type: none">The results of scientific, cultural and social research, cultural resources, services and infrastructures, tourism and ecotourism activities [Article 25, sub-sections i, f, g and h].The establishment of zoning and a detailed map [Article 25, sub-sections c and d].The identification management objective and management measures, including traditional measures; that outline the permitted and prohibited activities in the site [Article 25, sub-sections a, b, e and j].Clear plans for community development, awareness raising, monitoring and evaluation and other information as necessary [Article 25, sub-sections k, l, m and n]. <p>These process steps also broadly follow the Open Standards for the Practice of Conservation (v.04, 2020) as recommended for best practice planning approach under the International Union for the Conservation of Nature (IUCN), whereby the next steps post-drafting include:</p> <ul style="list-style-type: none">Conducting a thorough public consultation on the draft Management Plan.Incorporating the results of the public consultation into the draft plan, and iterative sharing with stakeholders.Approval or endorsement of the Management Plan at the local level and national state level.Implementation of the plan. <p>This last step requires that the management plan clearly outline the planned staffing and financing of the PA, as well as the plans to enhance staff competencies and capacities where required. This may include / be addressed through the development of a “Collaborative Management Unit” comprised of PMT members, with dedicated staffing roles provided by all stakeholder partners in the unit (communities, universities, partner organizations) where relevant.</p> <p>Once operational, clear plans should be documented for conducted regular:</p> <ul style="list-style-type: none">Monitoring and evaluation (to assess the effectiveness of implementation).Adaptive Management (updating the plan based on the results of monitoring and evaluation). | | | |

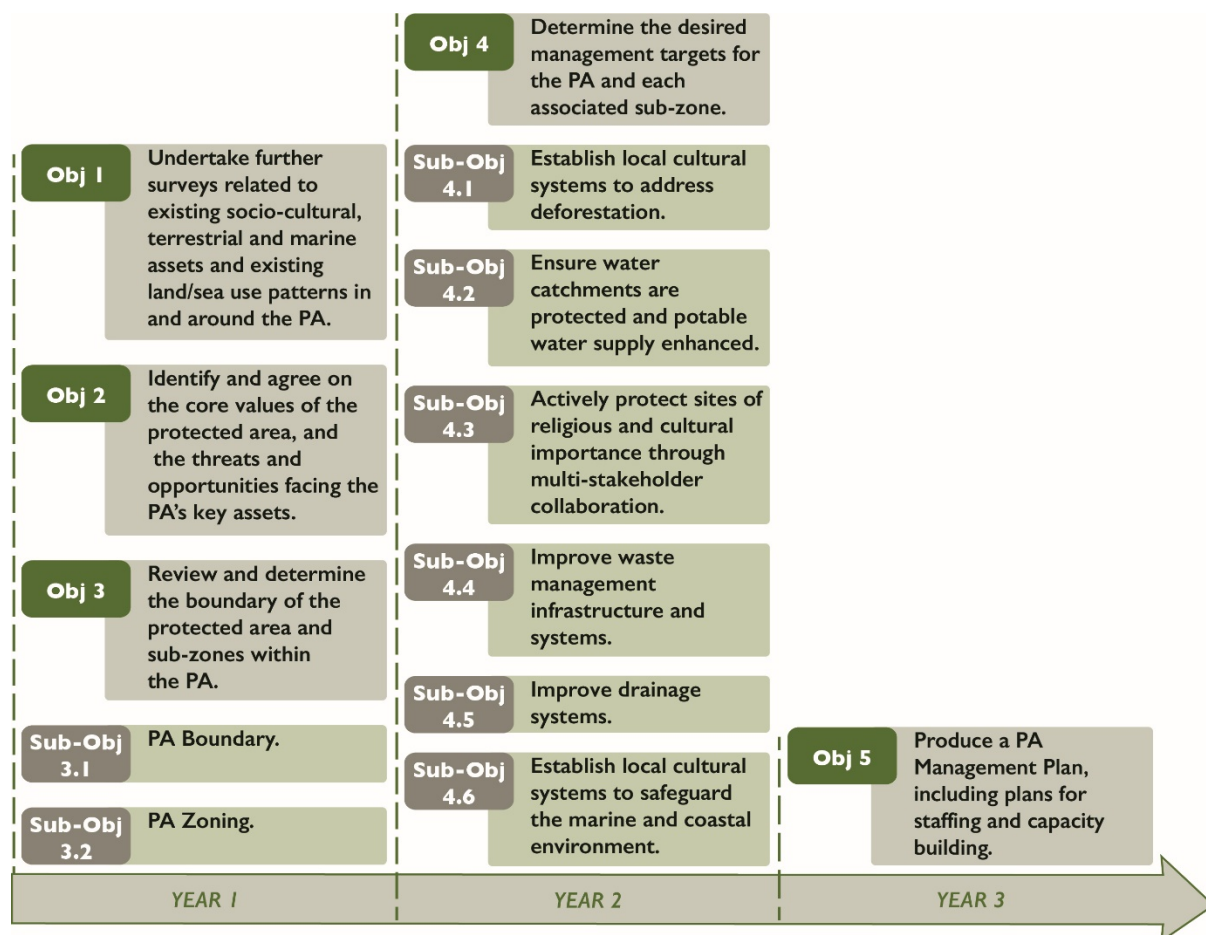


Figure 13: Timeline showing the three-year SMP objectives and sub-objectives.

MONITORING, EVALUATION AND LEARNING

This SMP for Cristo Rei is intended to provide a clear direction forward for effective management planning and sustainable development of the Cristo Rei PA. Delays to the development of this SMP due to the Covid-19 pandemic, and the lack of existing data about the site has resulted in the SMP aiming for a three-year timeline in an effort to accelerate the acquisition of baseline ecological, socio-economic and cultural information needed to progress through the objectives.

In terms of monitoring, evaluation and learning, it is recommended that progress towards achieving the objectives contained in this SMP is assessed annually (annex two), based on the assumption of objectives implementation commencing in early 2022.

This preliminary Sustainable Management Plan
For Cristo Rei PA has been produced with
support from independent consultant
Shinsuke Nakamura (V.01), and
SSIC consultant Eleanor Carter (V0.2).

Sustainable Solutions International Consulting (SSIC).
www.sustainablesolutions.consulting

Annex I: Stakeholder Consultations

For the development of this preliminary SMP, the following overt informant interviews were held with the following departments / organizations and individuals:

- Ministry of Agriculture and Fisheries (MAF) - Mr. João Antalmo Ferreira (Director National for Protection and Conservation of Forests and Eco-Tourism Development). 3/12/2020
- Dili Municipal Authority - Ms. Justina de Jesus Amaral (Director for Dili Municipality Tourism). 2/24/2020
- Cristo Rei Administrative Post - Mr. Gaspar da Silva (Administrator). 3/19/2020
- Sede Suco Camea [Camea Village Office] - Mr. Matos da Costa (Chefe Suco) [Village Chief]. 3/19/2020
- Sede Suco Hera [Hera Village Office] - Mr. Antonino da Silva (Chefe Suco) [Village Chief]. 3/23/2020
- Sede Suku Meti Aut [Meti Aut Village Office] - Mr. Julio da Costa Xavier (Chefe Suco) [Village Chief]. 3/19/2020
- Dili Diocese - Fr. Angelo Salsinha (Rector, Minor Seminary of Our Lady of Fátima). 2/26/2020

These interviews were led by Shinsuke Nakamura.

Community consultations were also conducted as follows:

SUCO CAMEA

Date: July 22, 2021. Location: Camea Lenuk Hun-Cristo Rei, Dili Municipality

Participants: 50 participants consisting of local and cultural leaders, teachers, youth reps and wider community members.

Facilitated by USAID's Tourism For All Project Team: Jacob Calar dos Reis (Partnership & Investment Lead), Julio dos Santos (National Tourism Coordinator), and Maximiliana Maria Colve Orleans de Araujo (National Tourism Coordinator).

SUCO METIAUT

Date: August 12, 2021. Location: Metiaut-Cristo Rei, Dili Municipality

Participants: 31 participants consisting of local and cultural leaders, teachers, womens reps and youth reps.

Facilitated by: António Gusmão (Senior Business Development Specialist), Jacob Calar dos Reis (Partnership & Investment Lead), Inacia Dos Santos (Prosperity Lead), and Maximiliana Maria Colve Orleans de Araujo (National Tourism Coordinator).

SUCO HERA

Date: August 13, 2021. Location: Hera-Cristo Rei, Dili Municipality

Participants: 31 participants consisting of local and cultural leaders, womens reps (> 34%), tourism reps and youth reps.

Facilitated by: António Gusmão (Senior Business Development Specialist), Jacob Calar dos Reis (Partnership & Investment Lead), Inacia Dos Santos (Prosperity Lead), and Maximiliana Maria Colve Orleans de Araujo (National Tourism Coordinator).

Annex 2: Simplified MEL checklist

A simplified MEL checklist is provided for annual review of this SMP and achievement of the objectives herein.

| OBJECTIVE | STATUS | If 'In Progress' or 'Not Started' | |
|--|-------------|-----------------------------------|------------------------------|
| | Completed | Reasons for Delay | Plans to accelerate progress |
| | In Progress | | |
| | Not Started | | |
| YEAR 1 – to be assessed December 2022 | | | |
| Obj.1 Undertake further surveys related to existing socio-cultural, terrestrial and marine assets and existing land/sea use patterns in and around the PA. | | | |
| Obj.2 Identify and agree on the core values of the protected area, and the threats and opportunities facing the PA's key assets. | | | |
| Obj.3 Review and determine the boundary of the protected area and sub-zones within the PA | | | |
| Sub-Obj. 3.1. PA Boundary | | | |
| Sub-Obj. 3.2. PA Zoning | | | |
| YEAR 2 – to be assessed December 2023 | | | |
| Obj.4 Determine the desired management targets for the PA and each associated sub-zone. | | | |
| Sub-Obj. 4.1. Establish local cultural systems to address deforestation | | | |
| Sub-Obj. 4.2. Ensure water catchments are protected and potable water supply enhanced | | | |
| Sub-Obj. 4.3. Actively protect sites of religious and cultural importance through multi-stakeholder collaboration | | | |
| Sub-Obj. 4.4. Improve waste management infrastructure and systems | | | |
| Sub-Obj. 4.5. Improve drainage systems | | | |
| Sub-Obj. 4.6. Establish local cultural systems to safeguard the marine and coastal environment | | | |
| YEAR 3 – to be assessed December 2024 | | | |
| Obj.5 Produce a PA Management Plan, including plans for staffing and capacity building | | | |



CRISTO REI: SUSTAINABLE MANAGEMENT PLAN

USAID Tourism For All Project