PROJECT DOCUMENT

SECTION 1: PROJECT IDENTIFICATION

Project title:	Establishing the National Framework and Operational Capacity for Implementing the Nagoya Protocol in Timor-Leste
Project number:	GEF Project ID: 9703 / UN Environment Project ID: 01547
Project type:	MSP
Trust Fund:	GEF
Strategic objectives:	GEF6/BD-3 Program 8
UN Environment priority[1]:	Sub-programme 4: Environmental Governance
Geographical scope:	National
Mode of execution:	External
Project executing organization:	Ministry of Development and Institutional Reform – National Directorate for Biodiversity Protection and Restoration
Duration of project:	48 months / January 2019 – December 2022

Institution/Agency	Cash (US$)	In-kind (US$)	%
Cost to the GEF Trust Fund			
GEF Trust Fund	1,319,863	-	24.6
Co-financing			
Ministry of Development and Institutional Reform (MDIR)	500,000	546,000	19.5
Ministry of Agriculture and Fisheries (MAF)	300,000	700,000	18.6
Centre for Climate Change and Biodiversity (CCCB), National University of Timor-Leste	-	100,000	1.9
Conservation International (CI)	-	454,000	8.5
European Union (EU)	-	1,100,000	20.5
Nimura Genetic Solutions, Ltd.	-	250,000	4.7
United Nations Environment Programme (UNEP)	-	100,000	1.9
Sub-total Co-financing	800,000	3,250,000	75.4
Total Co-financing (cash and in-kind)	*4,050,000*		75.4
Total	2,119,863	3,250,000	100
Total project value (GEF and co-financing)	*5,369,863*		100

[1] UN Environment *Medium-Term Strategy* (2018-2021)

1.1 Project summary

This project aims to support the development of the national framework and operational capacity for the implementation of the Nagoya Protocol in Timor-Leste, in order to establish the conditions enabling sustainable access to the genetic resources of the country, delivering fair and equitable benefits to its people while protecting legal and customary ownership and traditional knowledge.

As a first step, the project will establish the national regulatory and institutional framework for Access and Benefit Sharing (ABS) – by not only developing the necessary regulations, guidelines and protocols based on existing procedures and mandates, but also by building awareness and capacity as well as high-level support from policy makers and parliamentarians for acceding to the Nagoya Protocol. Once adopted, the framework will provide the necessary governing regulations and procedures for ABS implementation, and thereby provide legal clarity on access to genetic resources and benefit sharing in Timor-Leste. Second, the project will develop the country's capacity for research and monitoring of biological and genetic resources through the establishment of a National Database on biodiversity, genetic resources and associated traditional knowledge, a National ABS Clearing House Mechanism and the development of international partnerships for data exchange and capacity building.

In addition, in order to obtain adequate central government support for acceding to the Nagoya Protocol, it will be key to demonstrate the potential benefits of genetic resources and associated traditional knowledge for national sustainable development, in particular through stimulating research and business interests by building capacity and starting (even modest) pre-investments in biodiversity research, bio-prospecting[2] and product development. Through a partnership with Nimura Genetic Solutions, the project aims to build laboratory and research capacity for bio-prospecting, which is expected to deliver monetary and non-monetary benefits to the country and, thereby, support the conservation and sustainable use of biodiversity in Timor-Leste in the long term. The project will work to establish Community Protocols, Prior Informed Consent (PIC) and Mutually Agreed Terms (MAT) with local communities in two pilot sites, in order to obtain permission to conduct surveys of traditional knowledge and collect samples for the bio-prospecting trials, aiming to demonstrate how benefits can be delivered to the country and to its communities.

[2] The following definition of bio-prospecting is used by this project: "Bio-prospecting is the process of screening for and discovery and commercialisation of new products based on biological resources (plants, animals, fungi, bacteria etc.), including for biochemicals, genetic information, properties etc., for pharmaceutical, agricultural, cosmetic and other applications".

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ACRONYMS AND ABBREVIATIONS

ABS	Access and Benefit Sharing
ABSCH	Access and Benefit Sharing Clearing House
ACB	ASEAN Centre for Biodiversity
ADB	Asian Development Bank
ASEAN	Association of Southeast Asian Nations
CBD	United Nations Convention on Biological Diversity
CCCB	Centre for Climate Change and Biodiversity
CCCD	Cross-Cutting Capacity Development
CHM	Clearing House Mechanism
CI	Conservation International
CNA	Competent National Authority
CSAs	Competent Sector Authorities
CSO	Civil Society Organisation
ESERN	Environmental Social and Economic Review Note
ESES	Environment Social and Economic Sustainability
GDP	Gross Domestic Product
GII	Gender Inequality Index
GR	Genetic Resources
IBA	Important Bird Area
ICCA	Indigenous Community Conserved Area
ILCs	Indigenous and Local Communities
IP	Intellectual Property
KBA	Key Biodiversity Area
MAF	Ministry of Agriculture and Fisheries
MAGNT	Museum and Art Gallery of the Northern Territory
MAT	Mutually Agreed Terms
MCIE	Ministry of Commerce, Industry and Environment (now MDIR)
MDIR	Ministry of Development and Institutional Reform
MTA	Material Transfer Agreement
NBSAP	National Biodiversity Strategy and Action Plan
NDBPR	National Directorate for Biodiversity Protection and Restoration
NGS	Nimura Genetic Solutions, Ltd.
NT	Northern Territory, Australia
PA	Protected Area

PES	Payment for Ecosystem Services
PIC	Prior Informed Consent
PIR	Project Implementation Review
PMU	Project Management Unit
PSC	Project Steering Committee
TE	Terminal Evaluation
TK	Traditional Knowledge
TOR	Terms of Reference
UN Environment	United Nations Environment Programme
UNCCD	United Nations Convention to Combat Desertification
UNDAF	United Nations Development Assistance Framework
UNFCCC	United Nations Framework Convention on Climate Change
UNTL	Universidade Nacional Timor Lorosa'e (or National University of Timor-Leste)
UNTAET	United Nations Transitional Administration in East Timor
UNU-IAS	United Nations University-Institute for Advanced Sustainability Studies

SECTION 2: BACKGROUND AND SITUATION ANALYSIS

2.1 Background and context

1. Timor-Leste is a small island country at the southern end of Maritime Southeast Asia, and one of the world's youngest nations. A Portuguese colony since the 16th century, the country declared independence from Portugal in 1975 but was invaded and occupied by Indonesian forces only nine days later[3]. It gained independence from Indonesia in 2002 after a long period of violence and civil war. While the country has experienced internal tensions since it gained independence, most notably at the time of the 2006 political crisis, it has since then seen a period of relative stability.

2. Timor-Leste has an estimated population of 1.27 million people (World Bank, 2016), with a high population growth rate of 2.2%, and is one of the least developed countries in the region. In 2015 the Human Development Index for Timor-Leste was 0.605, giving it a rank of 133 out of 167 countries; the poverty rate was estimated at 41.8% by the World Bank in 2014; and 38% of children under 5 are underweight due to poor nutrition. These factors underline the importance of supporting social development as an essential part of reducing pressure on natural ecosystems and native biodiversity.

3. Timor-Leste, located 500 km north of Australia in the Lesser Sunda Islands, includes the eastern half of Timor Island, the Atauro and Jaco Islands, and the Oecusse region (a coastal enclave within Indonesian West Timor). Timor-Leste is largely mountainous, surrounded by a narrow coastal plain. Average rainfall varies from 1,000 mm/year along the northern coast, 1,500-2,000 mm in the central highlands to as high as 2,500 mm/year in the mountains of the southeast[4]. The steep topography, and shallow soils with low infiltration rates, combine to create extended periods when water is in deficit. The availability of water during the dry season (May-November) is a major factor in determining the distribution of agriculture and population. These natural factors, along with a lack of substantial large-scale water infrastructure, result in a situation where only 30% of otherwise arable land is under cultivation.

4. Over 70% of the population of Timor-Leste live in rural areas and over 70% of families rely on subsistence agriculture for their survival[5]. Main cereal crops include rice and maize while the major cash crop is coffee. The industry and manufacturing sector is underdeveloped, while oil accounts for over 90% of government revenues. Timor-Leste lies within the Wallacea biodiversity hotspot and is endowed with a rich marine and terrestrial biodiversity.

5. The country became a party to the United Nations Convention to Combat Desertification (UNCCD) in 2003, to the United Nations Framework Convention on Climate Change (UNFCCC) in 2006, and to the United Nations Convention on Biological Diversity (CBD) in 2007. In 2011, it published its National Biodiversity Strategy and Action Plan (NBSAP) and its Fourth National Report to the CBD, and in 2015, its Fifth National Report to the CBD, as well as a revised edition (2015) of the NBSAP 2011-2020. The government of Timor-Leste is, therefore, committed to address the environmental and conservation challenges facing the nation, and to achieve global environmental benefits.

6. Although Timor-Leste has not yet acceded to the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization (a supplementary agreement to the CBD), the country has taken important steps towards its implementation. In particular, the NBSAP includes Strategic Action 16 on Access and Benefit Sharing (ABS); the recently approved Biodiversity Decree Law (2017), in its Chapter 7 on 'Genetic resources and traditional knowledge', lays the legal

[3] The World Factbook – https://www.cia.gov/library/publications/the-world-factbook/geos/tt.html.
[4] Wallace, L. Sundaram, B. Brodie, R.S. Marshal, S. Dawson, S. Jaycock, J. Stewart, G and Furness L. 2012. Vulnerability assessment of climate change impacts on groundwater resources in Timor-Leste. Department of Climate Change and Energy Efficiency, Australian Government.
[5] Timor-Leste Strategic Development Plan 2011-2030. Version Submitted to the National Parliament.

foundation for the development of the national ABS framework. Nevertheless, the human and institutional capacities to develop and implement ABS in Timor-Leste are still limited.

7. The objective of this project is to establish the national ABS framework and the operational capacity for implementing the Nagoya Protocol in Timor-Leste, in order to deliver fair and equitable benefits from the utilization of genetic resources to its people and, ultimately, to advance conservation and sustainable use of globally significant biodiversity in the country.

Socio-economic background information

8. Oil and gas revenues apart, Timor-Leste's economy is dominated by subsistence agriculture. The agricultural sector employs more than 70% of Timorese people. The staple crops are rice, maize, and cassava. Cassava and maize together with other crops such as sweet potatoes and legume crops are sown at the onset of the rainy season in late November and harvested in February-March. This is followed by the planting of rice in April-May and its harvest in July-August. Rice production is mostly once year with low yield ranges from 2 ton/ha to 3 ton/ha[6]. Yield potential is up to 4 ton/ha according to a recent survey conducted by Gusmao & Da Costa in 2017 (unpublished data).

9. Food insecurity is still widespread and occurs from November to February (Gusmao, 2018). This period is considered as a lean period[7]. Gusmao *et al.* (2015) reported that communities also rely on the harvest of wild plants, such as wild beans and honey, during the "hungry season". For example, some family members, particularly young members, in the administrative post (former sub-district) of Liquidoe, Aileu Municipality, sell e.g. honey and other products in Dili while at the same time looking for employment to be able to send rice back to their families for consumption during the lent period. Vulnerable families may face food shortages during this period.[8]

10. A number of community members practice their traditional knowledge and medicine to cure people suffering from illness, broken bones, etc. However the contribution of these practices to families' income is not well understood. Often traditional medicinal practitioners keep their information secret. Generally, the person being treated with traditional medicine needs to follow certain rules and when the illness is cured the traditional practitioner asks for a wide range of rewards which may involve, among others, money, animals, or food. It is not clear to date if such traditional medicinal practices contribute to income generation, and thus food security, or if they are simply practiced to help people in need.

2.2 Global significance

11. Timor-Leste is part of the Wallacea region, which harbours a number of globally significant ecosystems and endemic species, including the world's 2nd highest concentration of endemic birds[9]. Wallacea is increasingly seen as a unique bio-region characterised by a large number of endemic species, including at least 1,500 plants, 262 birds, 127 mammals, 33 frogs, 99 reptiles and 50 freshwater fish species found nowhere else on earth. It has been identified by Conservation International as one of 25 Global Hotspots for the conservation of biodiversity. The non-bird land fauna of Timor and its associated islands is poorly known with recent surveys discovering new species of bats, frogs, geckos and skinks, but the available evidence indicates that there are high levels of endemism in all faunal groups[10]. At least 52 mammals

[6] http://seedsoflifetimor.org/timor-leste-agriculture; Lopes & Nesbitt, 2012.
[7] FAO/GIEWS, FAO/WFP, 2009 (http://www.fao.org/giews/countrybrief/country.jsp?code=TLS).
[8] Gusmao M., Da Costa Guterres A., Paul T., "Community adaptation to climate change: a case study from the sub-districts of Liquidoe and Remexio, District of Aileu, Timor-Leste", Revista Cientifica da Universidade Nacional Timor Lorosa'e (UNTL) Vol 3, No 2, 2015, pp 79-86.
[9] Trainor C. R., Santana F., Rudyanto, Xavier A. F., Pinto P., de Oliveira G. F. 2007. Important bird areas in Timor-Leste. Key sites for conservation. BirdLife International, Cambridge, United Kingdom. 86 pp
[10] O'Shea M, C Sanchez, A Kathriner, S Mecke, V Lopes Carvalho, A Varelo Ribeiro, Z Afranio Soares, L Lemos de Araujo and H Kaiser. *Herpetological Diversity of Timor-Leste: Updates and a Review of Species Distributions.* Asian Herpetological Research 2015, 6(2): 73–131

occur on Timor. Bats are the best represented group with at least 34 species, including 12 species of fruit bats. There are about 15-20 amphibian species and 40 or more reptile species on Timor.

12. Timor and the associated islands of Wetar, Sawu, Roti and Semau have been defined by BirdLife International as the 'Timor and Wetar Endemic Bird Area' (EBA) (Stattersfield et al. 1998); 35 restricted-range species have been identified as occurring in the Timor and Wetar EBA, of which 23 are confined to these islands. Five globally threatened and 15 near threatened bird species have been recorded in Timor-Leste, most of which are restricted-range species. Threatened and restricted bird species in Timor-Leste include the Christmas Island frigatebird (*Fregata andresi*), the Yellow-crested cockatoo (*Cacatua sulphurea*), the Wetar ground dove (*Gallicolumba hoedtii*), the Timor green pigeon (*Treron psittaceus*), and the Timor imperial pigeon (*Ducula cineracea*) (NBSAP, 2015).

13. Interest in the diversity of Timor-Leste's flora and fauna extends to its marine environment, as studies of its coral reef ecosystems indicate a high level of diversity in corals, fish, and other marine organisms. Timor-Leste is located within the Coral Triangle, which contains highly significant marine biodiversity, including 76 per cent of the world's coral species and 6 of the world's 7 marine turtle species (NEGA, 2010 and IBA, 2007). Marine surveys conducted by Conservation International on the reefs of Atauro island, as recently as mid-2016, found a total of 646 species of fish, with a maximum of 314 species at a single site, which is exceptionally high even within the Coral Triangle, known to have the highest coral diversity in the world. The country also boasts a diverse assemblage of sponges, a faunal group that is of high interest in bio-prospecting for genetic and bio-chemical resources.

14. Timor-Leste harbours globally significant ecosystems such as tropical rainforest, mangroves, wetlands like the Lake Iralalaru basin, and agricultural and marine ecosystems. Approximately 59% of the land area has some type of forest cover, but only 1.7% is covered by remaining primary forests found mainly in Lautem and Covalima municipalities. The Malesian region, to which Timor-Leste belongs, is recognised as a region of high plant biodiversity with an estimated 41,000 plant species, including 70% of species endemic to that region. (NBSAP, 2015) About 10.3% of Timor's flora is thought to comprise endemic species, which is surprisingly high for the relatively small land surface.[11]

15. Timor-Leste's position within Wallacea and the high degree of endemism of its fauna and flora, make the country an attractive location for investigations of biodiversity for science and for natural biologically active substances for medicinal, cosmetic, pharmaceutical and other uses[12]. An early example of a genetic resource endemic to Timor is *Eucalyptus urophylla,* which contributed to an international genetically enriched forest plantation industry based on fast growing hardwood stock (Stephen Midgely *pers. comm.*). However, it has been the pioneering work of Dr Sean Collins and his colleagues from the University of Ottawa which has opened up the potential importance of the genetic resources of the biota through their work on the rich traditional knowledge of medical ethnobotany in the Timorese population. This traditional knowledge was preserved through the war of independence from Indonesia by the need to rely on these, rather than western medicines. In Timor-Leste the complexity of tracking ethnobiology across language groups, especially in view of the historical social disturbances the country has faced in the past three decades, means that the understanding of these issues is still limited[13]. Nevertheless, the level of traditional knowledge in Timor-Leste, appears to be higher than in nearby areas such as the Tanimbar Islands, where preliminary investigations in rural

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[11] Trainor C. R. 2010. Timor's fauna: the influence of scale, history and land-use on faunal patterning. PhD. Thesis. Charles Darwin University, Darwin, Australia.

[12] Collins, SWM. 2005. *The Ethnobotany of East Timor*. M.Sc. Thesis, University of Ottawa: Canada; 2) Collins, SWM, Martins, X, Mitchell, A, Teshome, A and Arnason, JT. 2007. *Fataluku medicinal ethnobotany and the East Timorese military resistance.* Journal of Ethnobiology and Ethnomedicine 2007,3:5 doi:10.1186/1746-4269-3-5; 3) Erdmann, M.V. & Mohan, C. (eds) 2013. *A Rapid Marine Biological Assessment of Timor-Leste*, RAP Bulletin of Biological Assessment 66, Coral Triangle Support Partnership, Conservation International, Dili. 166 p.

[13] For example, India has spent decades creating and maintaining a digital library on traditional knowledge (see http://www.tkdl.res.in/tkdl/langdefault/common/Home.asp).

communities showed surprisingly little awareness of the medicinal qualities of a similar suite of species (Dr James Davie *unpublished pers. obs*. April 2015).

16. Timor-Leste is also well known to be rich in agricultural crop diversity (or agrobiodiversity). Over 500 agricultural crops have been identified and recorded thus far. Nonetheless, many species or varieties have not been identified yet, in particular wild or related plant species. Some recorded crops include well-known local varieties of black rice, millet, sweet potato, black mung bean, and black soybean. In addition, Timor-Leste has a unique hybrid coffee variety (*Hibrido de Timor*), a natural crossbreed of the Robusta and Arabica coffee varieties. This coffee hybrid is sought after in international markets as a high quality organic coffee for its quality, productivity and resistance to disease.

17. In order to efficiently progress detailed knowledge of the native biodiversity of the country and its traditional knowledge, it is important to ensure that biological and traditional knowledge is extended to areas other than the large Nino Konis Santana National Park at the extreme eastern end of the island, which is the source of most of the available scientific knowledge both in terrestrial and marine environments, and the region of Dili, which has received a lot of attention over the years and continues to be a focus for much of the existing project work. National assessments are very few, resulting in a strong bias based on level of effort. The work of Trainor (see Footnote 11) provides the best guide to the variability of environmental and habitat heterogeneity in Timor-Leste, while that of O'Shea *et al* (see Footnote 10) concludes that the fine scale heterogeneity, linked to human land use history and fragmentation is best organised around a combination of administrative boundaries and geographic variation, including rainfall, soils and topography. There are five distinct forest areas within Timor-Leste reflecting differences in soil, climate and topography. These areas are:

    - The Eastern region, which contains the majority of primary forest within the Nino Konis Santana National Park.
    - The Northern region, which contains open savannah with drought-resistant tree species and broad stretches of mangrove.
    - The mountainous Central region dominated by coffee plantations and other marginal agriculture; sparse vine forests and original forest remnants in steep gullies or rocky locations offering fire protection.
    - The Western region contains smaller areas of primary forest.
    - The Southern area contains mostly coastal forest including swamp and mangrove.

18. Sixteen Important Bird Areas (IBAs) have been identified and confirmed in Timor-Leste: 14 on the mainland and two on offshore islands (Atauro and Jaco islands). They cover a total area of 1,852 square kilometres, about 12.5% of Timor-Leste's total land area (Fifth National Report to the CBD). In addition, a review of biodiversity data by the Critical Ecosystem Partnership Fund (CEPF) for the Wallacea biodiversity hotspot identified 23 terrestrial and 12 marine Key Biodiversity Areas (KBAs) in Timor-Leste[14].

19. The current list of protected areas in Timor-Leste was developed under the United Nations Transitional Administration in East Timor (UNTAET) in 2000, when 15 'Protected Wild Areas' were designated. Some of these areas overlap with IBAs and KBAs. In addition, the government of Timor-Leste has identified a further 17 landscapes for protection[15]. However, full biological or ecological surveys to assess their conservation value have not yet been carried out.

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[14] Critical Ecosystem Partnership Fund, 2014. *Ecosystem Profile – Wallacea Biodiversity Hotspot.*

[15] Conservation International, 2016. PIF for GEF-funded project, *Securing the long-term conservation of Timor-Leste's biodiversity and ecosystem services through the establishment of a functioning National Protected Area Network and the improvement of natural resource management in priority catchment corridor*.

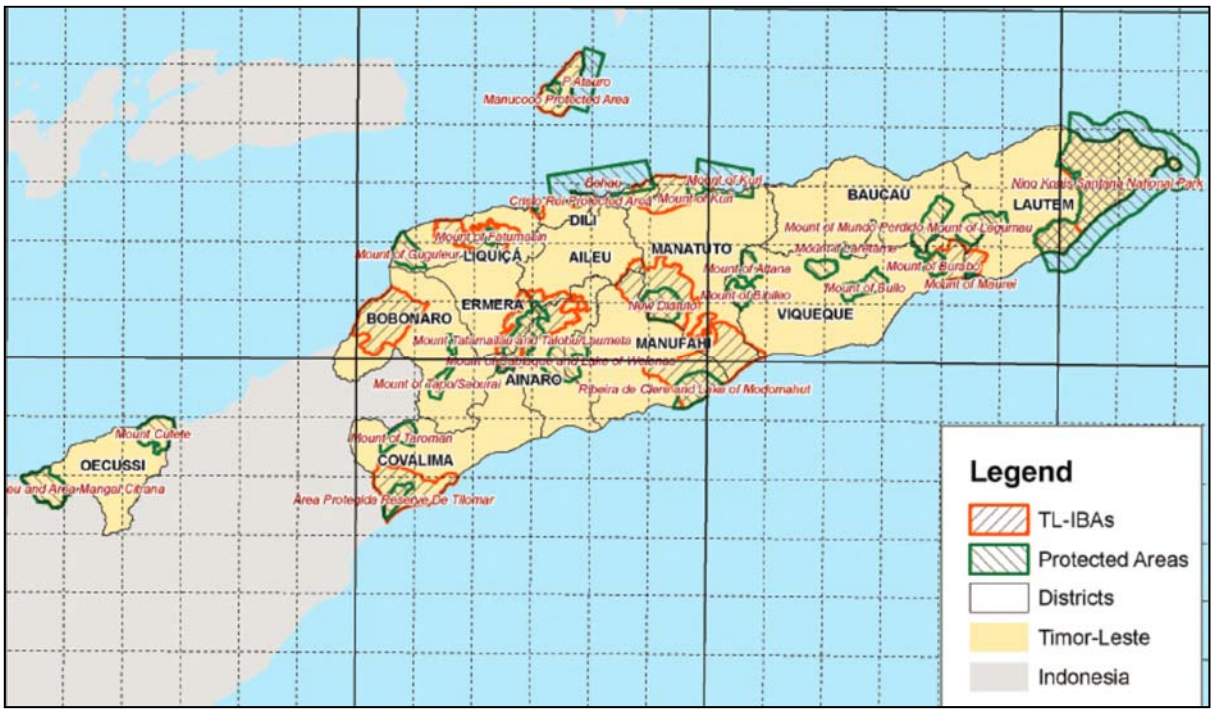

Figure 1: IBAs and existing and proposed Protected Areas (2011)

2.3 Threats, root causes and barrier analysis

Threats to biodiversity

20. The most encompassing and severe ongoing threat to biodiversity in Timor-Leste is deforestation and forest degradation. During the Indonesian administration (1975-1999), a third of upland and dry lowland forest ecosystems were lost through deforestation. Large areas of forest were destroyed through unsustainable harvesting for export of sandalwood, ebony, redwood teak and mahogany; and clearing as part of the war against FALINTIL, the local resistance fighters. The rate of deforestation during this period was 1.1% per year compared to the global average of 0.3% per year. Most of the deforestation was on sloping land, which contributed to additional environmental degradation through soil erosion, landslides and sedimentation of waterways. Deforestation and forest degradation has continued since independence, driven by a rapidly growing and impoverished rural population requiring agricultural land, fuelwood, housing infrastructure, etc. Between 2010 and 2015, 56,000 ha of forest were lost, amounting to an estimated 1.7% per year[16]. Demand for fuelwood remains high, and is especially problematic around the major population centres.

21. Forest degradation has greatly impacted biodiversity. For example, of the resident bird species on Timor, four are threatened with global extinction and eleven are near threatened, due to habitat loss from deforestation and from hunting/trapping for the wild bird trade. Important wetlands, which support many resident and migratory waterbird species, including four near threatened shorebirds, are also at risk. In addition to destroying biodiversity habitat, deforestation together with frequent burning in the sloping areas also degrades other important ecosystem services, including disruption to watershed functions and reducing agricultural land productivity through landslides and soil erosion. As a result, flooding and downstream siltation lead to reduced clean water and damage to wetlands and offshore fringing marine

[16] FAO, 2015. Global Forest Resources Assessment (FRA) 2015.

ecosystems. Some examples of this can be seen upstream and downstream of Dili, as well as in Aileu, Manatuto and Liquica.

22. The loss of forest cover also facilitates the introduction of pests and other invasive alien species. For example, Siam weed (*Chromolaena odorata*), which degrades pasture and crop lands, has become widespread since its introduction in 1975 and now affects 90% of the total land of Timor-Leste[17]. The invasive Mistflower (*Ageratina riparia*) is spreading quickly and has become a weed in coffee plantations in recent years in parts of Ermera, Aileu, Maubisse and similar ecological areas.

23. In addition, the NBSAP (2015) noted significant and ongoing coastal habitat loss in Timor-Leste, particularly in coastal mangroves. This habitat loss is mainly due to trees harvested for timber and fuel wood and, in some instances, conversion of hinterland mangroves to brackish water shrimp and/or fish ponds.

24. Other threats to biodiversity include overexploitation and unsustainable use of natural resources, overgrazing, habitat degradation and fragmentation, pollution, and climate change (NBSAP, 2015).

Root causes

25. The NBSAP (2015) lists the following as the main root causes of the threats to biodiversity.

    i) Low agricultural productivity and the lack of adequate land for cultivation puts pressure on forests and forces people to cut down trees to have more arable land and firewood.

    ii) The high rate of population growth, along with the expansion of urban areas and inadequate waste management and wastewater treatment, also puts pressure on natural resources.

    iii) The management system of established protected areas is currently inadequate. Most protected areas that have been declared have no management plan and lack institutional mechanisms for effective management.

    iv) The overall lack of information on environment and biodiversity such as hydrology, water catchment and wetland areas hinders a well-informed decision making and hampers conservation activities.

26. Another root cause is that little to no investments are being made in Timor-Leste in biodiversity conservation and biodiversity-friendly businesses, including bio-prospecting for genetic resources, due to the combined lack of basic knowledge on access and benefit sharing mechanisms, technology/capacity and 'proof-of-concept' regarding the economic opportunities, value and sustainable development potential of biological resources.

Barriers

27. This project proposes to address the challenges noted above by increasing understanding of the value of biodiversity and strengthening capacities for its management among the government and the people of Timor-Leste. Addressing Access and Benefit Sharing issues under the Nagoya Protocol offers one important way forward and is consistent with the country's NBSAP. In order to enable the country to formally adopt and implement the Nagoya Protocol, the following three barriers need to be addressed.

28. ***Barrier 1: Absence of a Regulatory and Governance Framework for ABS, taking into account the customary rights of indigenous and local communities***

    While the recently approved Biodiversity Decree Law (2017) and the General Forestry Regime (2017) provide the basis for ABS implementation in Timor-Leste, the necessary regulatory and institutional framework is yet to be developed. Another critical barrier relates to customary rights, as the recognition and reward of proprietary rights to the custodians of genetic resources including traditional knowledge

[17] FAO 2008. Timor-Leste National Action Plan to Combat Land Degradation.

is a core requirement of the Nagoya Protocol. Although customary ownership and rights are deeply entrenched in all ethnic communities in Timor-Leste, the country has experienced significant and ongoing disruption of customary laws, and the loss of traditional knowledge of the values of natural ecosystems. Consequently, implementation of ABS will require State and customary owners to understand and reach agreement to deliver equity and justice under the law. Furthermore, although a formal customary law process, in which local consent for land, resource use and conflict resolution is incorporated into the Biodiversity Decree Law, specific protocols and regulations for implementing such arrangements using Prior Informed Consent (PIC) and Mutually Agreed Terms (MAT) have not been developed, resulting in confusion about how ownership of genetic resources is vested and how genetic resources are valued within the context of that ownership.

29. ***Barrier 2: Lack of a systematic inventory of Timor-Leste's biological and genetic resources and associated traditional knowledge and understanding of their potential value***

Timor-Leste's 4th and 5th National Reports to the CBD consolidate information from a number of historical studies of the marine and terrestrial environment. These reports attest to the patchy nature of information on biodiversity in the country, including on results of any research and development on genetic and/or biochemical composition through the application of biotechnology as defined in Article 2 of the CBD. A more systematic compilation, storage and access to existing data and future additional surveys of the country on biological and genetic resources would contribute much to (i) a science-based approach to biodiversity conservation, and (ii) the sustainable utilisation of genetic resources as well as prospect for attracting research partnerships and additional resources to enact the Nagoya Protocol. In the absence of such an approach, biological data and new inventories will be extremely hard to access and use in ways beneficial to e.g. research institutions or new budding enterprises in biodiversity-friendly business in Timor-Leste. This baseline situation, as a result, lacks the important stimulus for more systematic exploration and screening of genetic resources in the country by linking the processes and objectives of private commercial outcomes to those of public policy and scientific enquiry. Additionally, survey in biological resources will remain limited in location and focus, and increasingly will depend on the areas selected by various development projects[18], thereby lacking context for comparisons, weakening the ability of the Competent National Authority (CNA) and Competent Sector Authorities (CSAs) – to be designated under the Nagoya Protocol – to monitor the fair and equitable access to genetic resources (Article 17 of the Nagoya Protocol), and of a more damaging nature, will remain a barrier for commercial and non-commercial research due to the perceived risk of non-compliance.

30. An effective ABS regime for sustainable use and fair access to genetic resources also needs to be responsive to the proprietary knowledge of the natural biodiversity by rural people within their territories[19]. Traditional knowledge is an explicit requirement for assessment of biodiversity in support of an ABS system. In Timor-Leste the complexity of tracking ethnobiology across ethnic/language groups, means that understanding of these issues is quite limited in the scientific literature. There is a long history of cultural studies in Timor-Leste, yet very few studies have focused on traditional knowledge and uses of native flora and fauna. Nevertheless, initial studies of ethnobiology indicate that there is a strong tradition of using native biota, especially for food and medicines (see Footnote 12). During the Indonesian occupation, most of FALINTIL members, the local resistance fighters, used collected biota from nature as medicines and they believed in the quality of these traditional medicines. The materials for traditional medicine are generally simply collected from the wild; few are domesticated. The drastic changes to the country since 1975 and the youth of the post-independence population, which is now predominantly under 30 years old, means that documentation of remaining

[18] See, for example, https://www.laohamutuk.org/Oil/TasiMane/SSB/EIA/WPFloraFaunaMar2012.pdf (Tasi Mane Project – Suai Supply Base EIA, Terrestrial Flora and Fauna Technical Report, 2012).
[19] See Article 12 of the Nagoya Protocol.

traditional knowledge is an urgent priority. Another challenge in tracking ethnobiology in Timor-Leste is that people who have traditional knowledge in using biota for traditional medicines may not easily share this information. There needs to be a clear incentive for sharing traditional knowledge.

31. A further constraint to an emerging ABS system is that outreach by government to rural people – the main stewards of biodiversity – is still not undertaken systematically so that there is little awareness of potential benefits from native genetic resources to reinforce traditional knowledge or to help preserve it. Even where information is available there is no centralized and easily accessible repositories (including physical structures such as museums/herbariums and information structures such as databases) in which to store and access information related to biodiversity, including traditional knowledge[20]. Consequently, that information is not easily available to inform decision making about access to genetic resources and to negotiate terms with international and national organisations wishing to carry out scientific studies or bio-prospecting within Timor-Leste's borders. A compounding factor affecting government attention and investments in the conservation and sustainable use of biological and genetic resources is the fact that there is limited understanding of the value and potential of genetic resources as part of the national sustainable development agenda. This has both historic reasons where most natural resources were 'occupied' and exploited by the external colonial powers Portugal and Indonesia, respectively, but also by the fact that until today little research capacity has been organised to assess such values and explore for business potential.

32. The lack of a national infrastructure to document biological and genetic resources means that knowledge is still preserved in overseas institutions, or in difficult-of-access specialist scientific media. Many past environmental assessments in the country, although undertaken by foreign entities, have included provisions for information sharing (usually with the Ministry of Agriculture and Fisheries) as well as training of counterpart staff and knowledge transfer (e.g., agreements to return photographic and preserved specimens to Timor-Leste when a natural history museum and herbarium were established). However, the benefits of most training programs have not been institutionalised. More generally, professional resources and capacities are very limited, making it difficult for the country to move systematically into new areas of potential biodiversity-based livelihoods, biotechnology and green economy options that would reinforce the retention of biodiversity. As Hinrich Kaiser argues, there does need to be a professional approach to systematically understanding the national biota and this needs to be institutionalised[21].

33. ***Barrier 3: Lack of practical experience and capacity with biodiversity governance instruments (including PIC and MAT) and field investigations in genetic resources and traditional knowledge in the public institutions of Timor-Leste***

    Since becoming independent in 2002, Timor-Leste has devoted significant resources to developing human capacity, with many graduates being sent overseas for postgraduate training. However, the challenge of building a professional class of researchers, resource managers and policy makers within government and civil society is very high. For example, the National University still does not have any programmes in general biological sciences, environmental science or natural resource planning[22]. More generally, interest, capacity and investments in biodiversity research, bio-prospecting and product development are significantly constrained in Timor-Leste by the lack of dedicated institutions, national and international partnerships, and capacities and tools to apply ABS principles (e.g. through PIC/MAT

[20] A GIS facility to support Timor-Leste's responsibilities under the CBD is located in the Directorate for Biodiversity Protection and Restoration, but this database is still embryonic and needs substantial strengthening, ideally within a national centralized facility to guarantee integrity, completeness and sustained management. At the least, it should be linked to the ALGIS currently housed in MAF.

[21] Kaiser H., Crother B. I., Kelly C. M. R., Luiselli L., O'Shea M., Ota H., Passos P., Schleip W., Wüster W. 2013a. Best practices: in the 21st century, taxonomic decisions in herpetology are acceptable only when supported by a body of evidence and published via peer-review. Herpetol Rev, 44(1): 8–23.

[22] There is a Biology Department under the Faculty of Education, but it is focused on education rather than research.

agreements). Another important barrier is the lack of champions on ABS issues and of demonstrated partnerships between the local stewards of biodiversity and genetic resources and investigating/bio-prospecting institutions. Although, in the baseline, laboratory systems are available (e.g., at UNTL, MAF and the Ministry of Health), lack of latest technology and scientifically sound research procedures for screening genetic and bio-chemical properties prevent utilising the potential biological diversity and resources available in Timor-Leste. The challenge of preparing for the implementation of the Nagoya Protocol in Timor-Leste provides a new opportunity to focus on the professional training needs required for the country to move forward. The recent establishment of the Centre for Climate Change and Biodiversity (CCCB) within the National University of Timor-Leste in collaboration with the Ministry of Commerce, Industry and Environment (now Ministry of Development and Institutional Reform) is a major step forward and may provide a public-sector nucleus for national capacity building.

2.4 Institutional, sectoral and policy context

National and local governance

34. Since independence in 2002, and despite a process of decentralisation launched in 2014, institutional governance has continued to be dominated by the national government. In the area of biodiversity conservation and ABS issues, the National Directorate for Biodiversity Protection and Restoration ('Biodiversity Directorate') within the Ministry of Development and Institutional Reform (MDIR) is responsible for policies and resource access issues related to biodiversity, while the Ministry of Agriculture and Fisheries (MAF) is responsible for agricultural, forestry and fisheries resources, the oversight of terrestrial and marine protected areas, and management of the Timor-Leste Agriculture and Land Use Geographic Information System (ALGIS). The potential for institutional management of ABS issues has advanced in several important ways, including through the establishment of the Biodiversity Directorate; and the formation by the Ministry in 2014 of a Centre for Climate Change and Biodiversity[23] within the National University of Timor-Leste (UNTL), which is responsible for biodiversity-related research, including research and extraction agreements.

35. Timor-Leste is preparing to grant significant autonomy, including increased legislative authority, to the 13 *Municipalities* (districts) in the country starting in the early 2020s. According to Timor-Leste's constitution, land and natural resources belong to the State, but customary law is recognized by the government and local agreement is required for the successful implementation of virtually all activities (for this reason, Prior Informed Consent processes are a long established informal requirement in the country). In addition, because of the inability of the national government to impose effective day-to-day administration, local, non-formal, controls remain very important throughout rural areas of the country, and the split in governance between national statutory provisions and the application of local laws depending on day-to-day needs generally functions well[24]. At present, the 442 *Sucos*[25] in Timor-Leste have some degree of autonomy, including their own structure of by-laws and regulations relevant to local administration[26]. In addition, Timor-Leste has started a process of Participatory Land Use Planning (PLUP), in order to promote sustainable land and forest management at the village level.

36. An important element of customary law in Timor-Leste is *Tara bandu*, which involves an agreement within a community to protect a special area or resource for a period of time. It is usually carried out for the harvest of agricultural produce, cutting of trees or collecting of forest products, and hunting or fishing but is being used as well to regulate social behaviour (NBSAP, 2015).

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[23] The Centre for Climate Change and Biodiversity was established in 2014 as a joint facility between the University and the Ministry of Commerce, Industry and the Environment (MCIE, now Ministry of Development and Institutional Reform) and has been receiving developmental support from a climate fund within the UNDP Country Programme under an MOU between UNDP and the Ministry.
[24] Cummins, Deborah 2015. *Local Governance in Timor-Leste*. Routledge: London.
[25] A *Suco* is the smallest political boundary in Timor-Leste. It is composed of several *Aldeias* (villages).
[26] Some *Aldeias* have also developed their own regulations and these will be reviewed if they exist in the pilot areas.

Policy context

37. A comprehensive appraisal of laws and regulations relevant to the Nagoya Protocol in Timor-Leste was conducted under the UNEP-GEF Regional ABS Project implemented by the ASEAN Centre for Biodiversity (ACB) in 2014[27]. Significant progress has been made since then, in particular with the recent enactment of the Biodiversity Decree Law (2017), which provides the legal basis for implementing the Nagoya Protocol[28]. The Biodiversity Decree Law sets out the authorities and duties for the relevant ministry to regulate the accessing of genetic resources; and provides guidance on benefit sharing, including authorization for the establishment of a permit system. Nevertheless, the detailed regulations and institutional arrangements for the implementation of these provisions still need to be developed. An excerpt of the most relevant provisions is shown in the table below (unofficial translation).

Article 9 – Government agency responsible for the environment

1. In implementing this law, it is the responsibility of the governmental entity responsible for the environment:

   […]

   i) To regulate access to genetic resources, associated traditional knowledge, and the fair and equitable sharing of benefits arising from their use, in accordance with international agreements to which Timor-Leste is a party;

Article 43 – Genetic resources

2. Access to genetic resources and their derivatives is subject to prior licensing by the governmental entity responsible for nature conservation and biodiversity.
3. The license granted under the terms of the previous number may only be granted if the following cumulative conditions are met:
   a) If the genetic resources are destined for a licit and environmentally correct purpose, under the terms set forth in the Convention on Biological Diversity;
   b) If the governmental entity responsible for nature conservation and biodiversity considers that it has sufficient information to guarantee the prior informed consent of the State;
   c) If there is an agreement governing the fair and equitable sharing of the monetary and non-monetary benefits arising from access to such resources.
4. The monetary and non-monetary benefits derived from access to genetic resources shall be shared fairly and equitably.

Article 44 – Traditional knowledge

1. The State recognizes, respects, preserves and maintains the knowledge, innovations and practices of indigenous and local communities involving traditional lifestyles relevant to the conservation of biodiversity and the sustainable use of its components.
2. Traditional knowledge of genetic resources belongs to the communities that hold it.
3. Access to the traditional knowledge associated with genetic resources is dependent on the granting of prior and informed consent of the community where such knowledge belongs, obtained under customary law in force, that does not contravene the Constitution and the law and obtaining prior license.
4. Monetary and non-monetary benefits derived from the value of traditional knowledge and practices associated with the use of genetic resources shall be shared fairly and equitably.

Article 48 – Licensing

1. The carrying out of any scientific research activity, regardless of its purpose, involving components of biodiversity is subject to the obtaining of a license, in the terms foreseen in this chapter.

[27] Felisbela Guterres Pires 2014. Appraisal of current laws and regulations relevant to the Nagoya Protocol in Timor-Leste.
[28] The Biodiversity Decree Law has been approved by Parliament but is yet to be promulgated by the President (expected in early 2019).

2. The granting of a license to carry out scientific research involving access to genetic resources or associated traditional knowledge or that is done in community or private property, is conditioned by the prior existence of written and informed consent of the respective local communities or the owner.
3. Marine scientific research is subject to special legislation.

Article 53 – Obligations

1. The duties of the holder of a license for scientific research are to:
   a) Keep a duplicate of any specimen that has been collected;
   b) Present to the governmental entity responsible for nature conservation and biodiversity a report on all the results of the research;
   c) Promote participation in research and training of national researchers and national institutions;
   d) Seek ways of transferring technology to national institutions;
   e) Respect the uses and customs of Timor-Leste during the investigation process;
   f) Be the holder of the license during the research activities and to display it whenever requested by the authorities.

38. Also recently enacted, the General Forestry Regime (2017), which governs the utilization and sustainable management of forests, includes a provision on access and benefit sharing for forest genetic resources. The relevant articles are shown below (unofficial translation).

Article 27 – Fair access and sharing

1. The State facilitates adequate access to forest genetic resources for environmentally sound uses, in accordance with the law.
2. The State shall be responsible for ensuring that the monetary or non-monetary benefits derived from access to forest genetic resources are shared in an equitable and transparent manner between natural or legal persons regularly authorized to access them and the State or the communities that are the managers of the same.
3. Exemptions from the obligation to share the benefits of access to and use of forest genetic resources shall be prohibited.
4. This Article shall not apply to the exchange of seeds and other genetic resources between natural persons and communities for traditional and non-commercial purposes.

Article 37 – Scientific and technological research

1. The State shall encourage, promote and finance scientific and technological research and studies on forest resources that are geared towards optimization, protection, conservation, prevention of degradation or damage, and maintenance of the sustainability of forest, agroforestry and of river basins.
2. Studies on the causes of loss of forest biological diversity developed or supported by the State should be participatory and transparent.
3. Projects or programs entered into with development partners or international donors related to the forestry sector should preferably include a budget for scientific research.
4. Holders of research or research license for forest resources, issued under the terms applicable to the licensing provided for in the legislation on biodiversity, are obliged to submit to the governmental entity responsible for forests, a duplicate of the research sample and a copy of the research results.

39. Two other Decree Laws and a Policy critical to the Nagoya Protocol have also been enacted. The Special Regime for the Ownership of Immovable Property[29] ('Land Law') has been in existence as a draft since 2012 and was enacted in 2017. The purpose of the law is to clarify the legal status of land ownership by bringing into effect the different dimensions of the right to private property provided for in the Constitution of Timor-Leste. Clarification of property rights is done through the recognition of prior

[29] https://www.parlamento.tl/docs/Proposta de lei/Lei das Terras/PPL Regime Especial Titularidade Bens Imoveis_Versão Bilingue PT TT.pdf

property rights. In addition, the law creates the figure of informal property rights and recognizes community ownership[30].

40. The Decree Law on the National System of Protected Areas[31] was enacted in 2016. This Decree Law establishes the legal regime applicable to the creation and management of the National System of Protected Areas, including provisions for obtaining licenses to conduct scientific or commercial investigations within protected areas.

41. Finally, the National Seed Policy for Timor-Leste of the Ministry of Agriculture and Fisheries regulates the conservation and use of plant genetic resources and recognizes the role of farmers in maintaining genetic resources in agricultural systems. The policy provides strategies to comply with the Convention on Biodiversity especially from the Agriculture sector, in the regulation of seed management (F. Guterres Pires, 2014).

42. Also of relevance to the implementation of the Nagoya Protocol, a Draft Intellectual Property Law has been prepared and is currently being discussed. In addition, Timor-Leste acceded to the WIPO Convention, the constituent instrument of the World Intellectual Property Organization (WIPO), in 2017.[32]

43. Timor-Leste is not yet a member of the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA) but may decide to become so in the future. The objectives of the ITPGRFA are the conservation and sustainable use of plant genetic resources for food and agriculture and the fair and equitable sharing of the benefits arising out of their use, in harmony with the Convention on Biological Diversity, for sustainable agriculture and food security. The ITPGRFA promotes facilitated access to plant genetic resources for food and agriculture, in particular those listed in its Annex I, established according to criteria of food security and interdependence. The ITPGRFA is, thus, closely related to the Nagoya Protocol. The Nagoya Protocol refers to the special considerations for genetic resources for food and agriculture in its Article 8.[33]

2.5 Stakeholder mapping and analysis

44. A series of consultations were held during the project design phase with the key stakeholders at the national and international levels to discuss different aspects of project design. This included: (i) bilateral discussions to solicit information on the current project baseline, consult on proposed project interventions and confirm the political, operational and financial commitment of project partners (including securing co-financing commitments); (ii) a consultative workshop with key stakeholders to present the project, identify opportunities for synergies and collaboration, and gather stakeholder inputs; (iii) a validation workshop to present the revised project outputs, activities, budget and implementation arrangements to the key agencies involved; and (iv) circulation of the project documentation for review and comments.

45. Consultations were also held with organisations present at the field level to identify potential sites for the development of model Community Protocols, inventories of traditional knowledge and for the field surveys (see Section 3.3). Two sites have been identified in discussion with partners – one marine/coastal (Atauro Island for its high marine biodiversity) and one terrestrial (Mt. Legumau in Bacau municipality, where Conservation International is planning a biodiversity survey under a CEPF grant). Due to synergies with existing projects implemented by Conservation International (CI) and

[30] http://timor-leste.gov.tl/?p=18216&lang=en (retrieved April 2018)
[31] http://extwprlegs1.fao.org/docs/pdf/tim167551.pdf
[32] http://www.wipo.int/treaties/en/notifications/convention/treaty_convention_221.html
[33] There have also been discussions around the accession by Timor-Leste to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), but progress has been slow. The accession to CITES would facilitate research collaboration for species covered under CITES.

MAF at these sites, and in order to be able to follow a proper process of Prior Informed Consent (PIC) supported through a communications strategy and Community Protocols, it was decided to consult with local communities in the two pilot sites only at the inception of the project implementation. However, CI and MAF are familiar with the communities in the two sites. A more detailed description is included in Section 3.3.

46. The table below lists the stakeholders that have been consulted during the development of this project and who are expected to play a role in the project. An analysis on gender and ethnic groups is included in Section 3.11 (Environmental and social safeguards). In addition, a socio-economic analysis has been produced to identify any socio-economic constraints for the implementation of ABS in Timor-Leste and to formulate recommendations to overcome these constraints. The socio-economic analysis is included as Appendix 15.

Stakeholder	Description / mandate	Role and involvement in the project
Government		
Ministry of Development and Institutional Reform (MDIR) *Note: It is expected that the designation of the Ministries will change, as a new Government will be taking office following the elections on 12 May 2018.*	The Directorate General of Environment is located under the Vice-Ministry of Development for Housing, Spatial Planning and Environment in the MDIR, and includes three National Directorates: • The National Directorate for Biodiversity Protection and Restoration; • The National Directorate for Climate Change; and • The National Directorate for Pollution Control and Environmental Impact Assessment. The Directorate General of Environment is the national administrative and managing authority for environmental policy, biodiversity conservation, and climate change. It also hosts the focal points for GEF, CBD, and UNFCCC.	The Biodiversity Directorate within the Ministry will act as the national Executing Agency for the project. It will have the lead responsibility for the project execution; managing consultants, sub-contractors, and reporting and quality control (see details in Section 4). In addition, the Biodiversity Directorate is likely going to have the role of the Competent National Authority (CNA) under the institutional framework to be established by the project, leading the implementation of ABS policy, legislation, awareness, and compliance monitoring.
Ministry of Agriculture and Fisheries (MAF)	The Ministry of Agriculture and Fisheries is responsible for agricultural, forestry and fisheries resources and the oversight of terrestrial and marine protected areas. It includes the following National Directorates: • The National Directorate of Agriculture and Horticulture; • The National Directorate of Forestry; • The National Directorate of Fisheries; • National Directorate of Quarantine Service; and • The National Directorate of Research MAF has an existing mandate of providing licenses for surveys in protected areas. It has existing capacity related to research on agrobiodiversity, seeds, and is responsible for the Timor-Leste Agriculture and Land Use GIS (ALGIS) system. It has a soil laboratory and seed collection facility in Dili.	MAF will be responsible for the implementation of the ABS regulations with regard to the General Forestry Regime, the Protected Area Law and the National Seed Policy. Competent Sector Authorities (CSA) will be designated within the Ministry as part of the national ABS framework. Additionally, MAF and its various departments will act as a consultative partner, technical advisor and outreach facilitator. MAF will also be involved in the national ABS monitoring and be part of the laboratory/bio-prospecting technology transfer process.

Stakeholder	Description / mandate	Role and involvement in the project
Ministry of Health	The Ministry of Health is responsible for setting health policy with regard to the production, import/export, distribution and trading of chemical, biological and pharmaceutical products and their monitoring. It also undertakes epidemiological and sanitary surveillance which includes activities for scientific and technological development.	The Ministry of Health will be involved in the project activities and may be designated as a Competent Sector Authority (CSA) under the national ABS framework. It will also be involved in the awareness and capacity building activities.
Customs Authority	The Customs Authority in the Ministry of Finance defines and regulates the customs regime on goods entering or departing from Timor-Leste.	Inform and engage.
Department of Museums, National Directorate of Arts and Culture under the Ministry of Education (previously Ministry of Tourism)	Responsible for the establishment of museums. Currently there are plans to establish a National Library and a National Museum in Dili. However, the timing is still unclear. Also, this does not yet include plans for a natural history museum. Nevertheless, the Department of Museums has expressed interest in participating in training activities under the project in view of potential future development of a natural history museum and/or herbarium.	Engage in project activities related to training and capacity building, in particular with regard to specimen collection, cataloguing and preservation.
Ministry of Foreign Affairs	Responsible for international organizations, treaties and conventions.	Inform and engage.
Ministry of State Administration	Responsible for the decentralisation process (through municipalities/local administration). Municipalities need to be notified of any licenses provided by the central government.	Inform and engage.
Local Government	*Suco* and *Aldeia* councils and community leaders, responsible for local administration and day-to-day management, including according to customary law.	Will be involved for the development of model Community Protocols as well as PIC/MAT agreements.
National research institutions		
National University of Timor-Leste (UNTL)	University in Dili with nine faculties (Agriculture, Exact Sciences, Social Sciences, Law, Economics, Education, Engineering, Philosophy, and Medicine). UNTL hosts the Centre for Climate Change and Biodiversity. The following faculties and departments are of particular relevance to the project: • Faculty of Agriculture; • Faculty of Social Sciences; and • National Centre for Information Technology.	UNTL will support the project under the umbrella of the CCCB (see below).
Centre for Climate Change and Biodiversity (CCCB) at UNTL	The CCCB was established in 2014 within the National University of Timor-Leste (UNTL) in collaboration with the Ministry of Commerce, Industry and the Environment (MCIE, now Ministry of Development and Institutional Reform).	UNTL and the CCCB, under the mandate of MDIR, will act as the host institution for the National Database on biodiversity, genetic resources and traditional knowledge, in close collaboration with the Biodiversity Directorate (Outcome 2.1). Its IT department

Stakeholder	Description / mandate	Role and involvement in the project
	The Centre has a Memorandum of Understanding with MDIR. It is foreseen that the Centre, including its website and IT infrastructure, will be strengthened through several upcoming projects, including the GEF-UNDP CCCD project, a climate change adaptation project currently under development, the 5-year AI-Com project that started in 2017, as well as a trilateral research project between Timor-Leste, Indonesia and Australia.	can provide technical support and maintenance. UNTL and the CCCB will also support the implementation of the bio-prospecting partnership under Outcome 2.2, by providing research staff and capacity. UNTL will also act as an advisor for and support the implementation of Outcome 1.1 on the development of the national ABS framework and Outcome 1.2 on capacity building.
Universidade Da Paz	Undergraduate university in Dili.	Inform and engage
Universidade Dili	University in Dili with six faculties (Economics, Law, Political Science, Health Science, Educational Science, and Engineering).	Inform and engage
Dili Institute of Health Science	Department of Pharmacy and Health Nutrition. Operates a small pharmacy laboratory on the outskirts of Dili, which will move to a more central location later in 2018, where it will have a bigger laboratory facility. Currently, the pharmacists of the institute conduct morphological studies of plants used as herbal medicines. In the future, they expect to have equipment for plant chemical analysis.	Staff from this institution will be engaged in capacity building (Outcome 1.2) and in the bio-prospecting activities (Outcome 2.2) based on their knowledge of medicinal plants.
International institutions		
United Nations Environment Programme (UN Environment)	UN Environment is the United Nations agency for the environment, playing a leading role in supporting the MEAs and the environmental dimension of the SDGs. It also acts as the secretariat for several MEAs (CBD including Nagoya Protocol, chemicals conventions, CITES, Minamata, Montreal).	UN Environment is the GEF Implementing Agency for this project, responsible for monitoring the implementation and impact of the project, reviewing progress in the realization of the project outputs, and ensuring the proper use of GEF funds.
Museum and Art Gallery of the Northern Territory (MAGNT), Australia	MAGNT is the main museum in the Northern Territory, based in Darwin. Its herbarium includes, among others, a collection of plant specimens from Timor-Leste. Since 2000, MAGNT has been assisting the National Directorate of Culture in the rescue and curation of the National Collection of Timor-Leste, and in the organisation of collaborative exhibitions on Timor-Leste. MAGNT also has been advising the Government of Timor-Leste on the establishment of a future National Museum and has provided training in cultural heritage curation and management.	MAGNT is expected to support Component 2 of the project through data exchange on biodiversity, genetic resources and/or associated traditional knowledge. MAGNT is also expected to provide technical assistance for the development of protocols for the national database to be established under the project, and to provide technical support and training for the collecting and cataloguing of information on specimens.
Charles Darwin University	Researchers from this Australian university regularly conduct research in Timor-Leste.	CDU will be engaged jointly with MAGNT for data exchange and capacity building.
Northern Territory Herbarium (under the	The NT Herbarium hosts a collection of 270,000 preserved plant specimens, mostly	The NT Herbarium will be engaged jointly with MAGNT to provide technical assistance

Stakeholder	Description / mandate	Role and involvement in the project
Department of Environment and Natural Resources of the Northern Territory, Australia)	from the Northern Territory but also from Timor-Leste, kept for reference and research. Since 2005, it has undertaken a number of flora survey projects in Timor-Leste. The NT Herbarium maintains the NT eflora database (http://eflora.nt.gov.au/).	and capacity building, in particular for the National Database/virtual library of specimens to be established under the project.
Indonesia: • Herbarium Bogoriense in Bogor • Bogor Zoology Museum (LIPI – Cibinong) • Bogor Botanical Gardens • IPB – Agricultural University Bogor	Historic literature references on biological resources of Timor-Leste. Collection of plant specimens of the region (including Timor-Leste).	Engage for the collection of existing information on biodiversity and genetic resources under Output 2.1.2 by consulting 'secondary' literature on plant, faunal and other biological resources records.
University of Singapore	Research interest in Timor-Leste.	Engage for the collection of existing information on biodiversity and genetic resources under Output 2.1.2.
University Leiden, The Netherlands	Historic literature references on biological resources of Asia, including former East Timor.	Engage for the collection of existing information on biodiversity and genetic resources under Output 2.1.2.
Universities in Portugal	Historic literature references on biological resources of East Timor/Timor-Leste.	Engage for the collection of existing information on biodiversity and genetic resources under Output 2.1.2.
Conservation International Timor-Leste Country Programme	Conservation International has a presence in Timor-Leste since 2009. It has conducted marine assessments in the Nino Konis Santana National Park and Atauro Island. It has supported the establishment of Community-based Marine Managed Areas and is supporting MAF to prepare Management Plans of Protected Areas. It has also supported MAF in preparing MOUs with foreign research organisations.	CI's Timor-Leste Programme will provide advice for the development of the national ABS framework and PIC/MAT model agreements. It will also support the implementation of Outcome 2.1 on research and monitoring; development and testing of Community Protocols; and community facilitation and organisation for the traditional knowledge and biological resources' inventories in the two pilot field sites (Atauro Island and Mt. Legumau) under Outcome 2.2.
World Vision Timor-Leste	World Vision Timor-Leste (WVTL) began its first project in 1995 in Aileu municipality. Since then, WVTL has implemented a range of community-based programs and currently works in Aileu, Baucau, Bobonaro and Dili municipalities.	World Vision will be consulted as a stakeholder for the development of model Community Protocols and the outreach and awareness raising activities. Could potentially be involved for facilitating access to communities if additional survey sites are needed.
With One Seed	With One Seed is the first Gold Standard verified carbon forestry program in Timor-Leste. It is working with subsistence farming communities, in particular in Baguia community, Baucau municipality, to replant their forests thereby creating a carbon store to build local economies. It also delivers practical education and training in agroforestry and permaculture.	With One Seed will be consulted as a stakeholder for the development of model Community Protocols and other project activities. Could potentially be involved for facilitating access to communities if additional survey sites are needed.

Stakeholder	Description / mandate	Role and involvement in the project
Delegation of the European Union to Timor-Leste	Jointly with the German Federal Ministry for Economic Cooperation and Development, the Delegation of the European Union to Timor-Leste is, among other programmes, funding the Partnership for Sustainable Agro-Forestry (PSAF).	Co-financing partner under its PSAF, implemented by GIZ. The PSAF will contribute to the project through its adaptive research approach, which aims to identify suitable (native and introduced) forestry and agroforestry species and therefore generate improved knowledge of Timor-Leste's genetic resources. See Section 2.6 (Baseline analysis and gaps) for details.
UNDP Timor-Leste Country Programme	UNDP is implementing several GEF-funded projects in collaboration with the Government of Timor-Leste, in particular the Cross-Cutting Capacity Development (CCCD) project.	UNDP will be engaged to coordinate activities, in particular under the CCCD project, with regard to the development of information management systems, capacity building, awareness raising on the Rio Conventions – specific to ABS, and the legal and regulatory framework. Where relevant, activities can be organised jointly between the two projects in order to optimise the use of resources.
USAID AVANSA Agrikultura	USAID AVANSA Agrikultura is a five-year (2015-2020) project designed to accelerate inclusive growth through increased productivity and profitability of the horticultural food chain.	Inform and engage, in particular for their knowledge on native species for the inventory of biological resources of Timor-Leste.
ASEAN Centre for Biodiversity (ACB)	Intergovernmental regional centre of excellence that facilitates cooperation and coordination on biodiversity among the members of ASEAN. Based in Manila, Philippines. ACB led the implementation of the UNEP-GEF Regional ABS Project from 2011 to 2014.	The Centre will act as a consultative partner during the project implementation, in particular for ABS capacity building activities.
GIZ	The German Development Cooperation Agency (GIZ) has implemented several programmes in Timor-Leste, in particular the Agro-Biodiversity Project, the Global Climate Change Alliance Programme, and will be implementing the Partnership for Sustainable Agro-Forestry (PSAF). Globally, GIZ has been implementing the ABS Capacity Development Initiative.	Partner under Outcome 2.1 under the adaptive research approach to be implemented within the PSAF. See Section 2.6 (Baseline analysis and gaps) for details.
JICA Timor-Leste	Japan International Cooperation Agency. The JICA Timor-Leste Office in Dili was established in March 2000 as a base for promoting JICA's assistance for Timor-Leste's nation-building effort. This wide-ranging assistance covers a variety of sectors from the policy level to the grassroots level.	Inform and engage
Private sector		
Nimura Genetic Solutions, Ltd.	Nimura Genetic Solutions Co., Ltd. (NGS) is a company involved in bio-resource exploration, with the aim of discovering and developing new beneficial compounds through collaborative research and development. NGS was established in 2000	Co-financing partner under Outcome 2.2. NGS will support project activities related to the development of bio-prospecting, technology transfer, and capacity building on laboratory management in Timor-Leste.

Stakeholder	Description / mandate	Role and involvement in the project
	and is based in Tokyo, Japan. NGS has supported, among others, Malaysia and Bhutan in building national capacity for bio-prospecting and the implementation of ABS.	Additionally, NGS will assist with market access.
Small and Medium Enterprises (SMEs) and Community Cooperatives		Inform and engage in activities related to the development and commercialisation of products from genetic resources.
Media	Radio, TV and newspapers of Timor-Leste.	Inform and engage in awareness activities to be defined in the outreach and institutional development plan.
Civil society		
Haburas Foundation / Friends of The Earth Timor-Leste	The Haburas Foundation was formed by a group of Timorese students in 1998 during the Indonesian occupation of East Timor. It is the oldest and most active national environmental group in the country. Haburas uses a wide network of local community groups and relies on traditional Timorese culture to promote better environmental management practices that also respond to the developmental needs of local communities.	Will be consulted as a stakeholder for the development of model Community Protocols and other project activities. Could potentially be involved for facilitating access to communities if additional survey sites are needed.
RAEBIA (Resilient Agriculture and Economy through Biodiversity in Action)	RAEBIA is a local NGO established in 2013. RAEBIA is engaging Timor-Leste's communities in sustainable land use to provide food security specifically in remote areas and build resilient communities to ensure that natural resources are well managed. RAEBIA applies and promotes the concepts of conservation agriculture and agrobiodiversity.	Will be consulted as a stakeholder for the development of model Community Protocols and other project activities. Could potentially be involved for facilitating access to communities if additional survey sites are needed.
NaTerra	NaTerra is a Timorese grassroots organization working in the area of education for sustainable community development using permaculture and holistic education as its main tools. They are working both in Baucau Municipality and on Atauro Island.	Will be consulted as a stakeholder for the development of model Community Protocols and other project activities.
Stewards / Providers of Genetic Resources (i.e. local communities, farmers, protected area managers, etc.)		The stewards of genetic resources and associated traditional knowledge will be involved in the field survey activities under Outcome 2.2, by fully respecting the PIC procedures developed by the project. Access to communities will be facilitated by local partner organisations. Two sites have been identified for the development of Community Protocols and for field surveys under Outcome 2.2 – one marine/coastal site (Atauro Island for its high marine biodiversity) and one terrestrial site (Mt. Legumau in Bacau municipality, where Conservation International is planning a biodiversity survey under a CEPF grant), based on the existing presence and work by Conservation International and MAF on

Stakeholder	Description / mandate	Role and involvement in the project
		biodiversity surveys and community engagement in conservation.

2.6 Baseline analysis and gaps

Government baseline in support of the Nagoya Protocol

47. Despite a number of well-trained young professionals in both the lead Ministries concerned with implementing the various elements under the CBD related to genetic resources – specifically the Nagoya Protocol – and in the National University of Timor-Leste (UNTL), there has been limited progress in establishing a national framework towards the fair sharing of benefits arising from the utilization of genetic resources, including through non-commercial and commercial research, thereby contributing to the conservation of biological diversity and the sustainable use of its components. This limited progress is mainly related to chronically low government budgets made available for developmental projects and specifically environment protection, including for research and policy development. Nevertheless, the recent enactment of the Biodiversity Decree Law and the General Forestry Regime by Parliament represents a major step forward for ABS implementation in Timor-Leste.

48. In the baseline, government programmes enabling aspects for the implementation of the Nagoya Protocol in Timor-Leste, namely assistance with legislation, work towards acceding to the Nagoya Protocol, the sustainable utilisation of genetic and bio-chemical resources through biological diversity information management, facilitation of research, as well as capacity building, is worth at least USD 2,146,000 in resources committed by government through the Ministry of Development and Institutional Reform (MDIR), MAF and the UNTL under its agenda of national development.

49. This includes the institutional support to the collaborative *Centre for Climate Change and Biodiversity* (CCCB) by MDIR and UNTL. The CCCB is already working through an MOU with the MDIR to implement field projects and has taken on existing resources within the UNTL, which will constitute important baseline activities and co-funding to the GEF project. The CCCB and existing facilities at UNTL will provide an institutional basis for the development of the National Database on biodiversity, genetic resources and traditional knowledge. In addition, the UNTL Faculty of Agriculture provides the foundation for upscaling and outreach through its research and teaching activities in the field of forestry, agriculture (including agro-biodiversity), and animal science. UNTL and the CCCB will also support the implementation of the bio-prospecting partnership under Outcome 2.2, by providing research staff and capacity. There is also an opportunity to engage with UNTL's Faculty of Social Sciences for research on traditional knowledge and, in particular, the role of rural women as holders of genetic resources and associated traditional knowledge.

50. The *National Directorate of Research* under MAF has developed research capacity on plant genetic resources and hosts a laboratory and a seed repository in Dili. In addition, it has established several research centres across the country for research on agriculture, including agroforestry. As an example, MAF currently conducts research on identifying local orange varieties that include traits of sweetness. The *National Directorate of Forestry* has recently established an arboretum (collection of tree species) near Dili as well as a herbarium in Nino Konis Santana National Park. MAF has established procedures to authorise research in protected areas, forestry, and fisheries in line with their mandate. In collaboration with Conservation International, MAF is developing model MOUs for foreign research institutions that intend to conduct research in Timor-Leste.

51. Existing laboratory facilities identified during the project design phase are as follows[34]:

- The UNTL Faculty of Agriculture has a laboratory facility (including soil, biology, chemical laboratories) at its Hera campus outside Dili. However, due to its relative remoteness, the facility is not regularly used and not well maintained.
- MAF's Directorate of Research has a Seed and Soil Laboratory adjacent to their offices in Dili, which is used for soil, seed and post-harvest analyses as well as, occasionally, for other research activities by UNTL researchers and programmes such as AI-Com. MAF also has a cold storage facility for seeds near the laboratory.[35] The laboratory is well maintained and includes a wide range of equipment.
- The Directorate General of Water and Sanitation within MDIR operates a National Laboratory for Water and Sanitation, where it conducts water quality testing.[36]
- The Dili Institute of Health Science has a small pharmacy laboratory on the outskirts of Dili. The laboratory will move to a more central location in Dili, where it will have a bigger laboratory facility, later in 2018. Currently, the pharmacists of the institute conduct morphological studies of plants used as herbal medicines. In the future, they expect to have equipment for plant chemical analysis.
- A National Health Laboratory. The National Health Laboratory is a semi-private entity under the Ministry of Health. It is located adjacent to the National Hospital and provides clinical laboratory services to them. The laboratory is semi-autonomous and operates in a business-oriented manner. It has well-trained technical staff. Its facilities are modern, well equipped and maintained.
- A Veterinary Laboratory.
- A Laboratory for Entomology (insects/pests) at MAF.
- A Laboratory for Food Analysis under the Ministry of Commerce and Industry.

52. The MAF Seed and Soil Laboratory as well as the National Health Laboratory have been identified as ideal facilities for the implementation of the bio-prospecting activities under Outcome 2.2. The modalities of collaboration are currently being discussed, and a briefing note is being prepared for the concerned agencies. An agreement will be established with these two facilities at the start of the GEF project.

53. The Timor-Leste National Directorate of Arts and Culture under the Ministry of Education (previously Ministry of Tourism) is planning to establish *a National Library and a National Museum*, for which it has received training from Australian and Indonesian institutions. While a natural history museum is not yet planned, this could potentially be incorporated into the National Museum in the future. The Department of Museums of the National Directorate of Arts and Culture has expressed interest in participating in training on the collection, cataloguing and preservation of plant specimens under this project.

Baseline projects by Donor Partners and Civil Society Organisations

54. The Delegation of the European Union to Timor-Leste is, jointly with the German BMZ, funding the *Partnership for Sustainable Agro-Forestry (PSAF)*, a five-year project starting in 2018 and implemented by GIZ. The PSAF aims to "contribute to a peaceful, inclusive and sustainable development in Timor-

[34] The Directorate General of Environment used to have a laboratory facility for water and air quality testing. The facility was destroyed in the 2006 crisis; however, the Directorate still has some equipment and staff. In the future, this facility may be re-established, depending on government funding.

[35] The SAPIP project intends to establish a Timorese Institute of Agricultural Research under MAF, under which a National Laboratory will be established, and to strengthen MAF's existing *in situ* research centres. The National Laboratory is anticipated to be operational in around two years.

[36] For this laboratory, Aguas de Portugal is supporting the establishment of a bigger laboratory in a new facility, and will provide equipment and capacity building for the laboratory staff. The location of the new facility has not been decided yet; it is anticipated that the new laboratory will be established within the next 1-2 years.

Leste through improved rural access, the creation of employment, economic and domestic revenue opportunities, and a durable reduction in food insecurity and malnutrition in rural areas". The project will be delivered through i) technical cooperation from GIZ to support MAF's efforts to foster a conducive legal and regulatory environment for agroforestry and associated value chains, as well as to support the development of agroforestry systems, land and natural resources management, technical skill development, and market linkages; and ii) technical support from the International Labour Organisation (ILO) to strengthen local training institutions and local authorities, and train and contract local construction companies to rehabilitate/maintain rural roads that service agroforestry areas in order to facilitate market access. The GIZ-implemented component has been allocated EUR 17 million and includes the following outputs: (i) production and productivity of agroforestry systems are increased; (ii) capacity of participants along selected agroforestry value chains is strengthened; (iii) market access for specific agroforestry value chains (agriculture, horticulture, wood production and processing) is improved; and (iv) the institutional and organisational framework for the promotion of agroforestry is improved. The PSAF will contribute to the objectives of the GEF project through its adaptive research approach, which aims to identify suitable (native and introduced) forestry and agroforestry species and therefore generate improved knowledge of Timor-Leste's genetic resources. This will be of interest for GEF project collaboration in the field of prospecting for new species, cross-breeding for enhanced plant properties, market linkages to interested companies through NGS etc. The project will also help strengthen research capacity and coordination among different departments and agencies.

55. The PSAF builds on previous work done under the *Global Climate Change Alliance (GCCA)* Programme Timor-Leste (ending in 2018), implemented by GIZ and Camoes, the Portuguese development cooperation. Under the GCCA, GIZ provided support for water and soil conservation activities, and for forest protection and re-forestation measures in order to help communities to adapt to climate change. The project set up a database of 35 forest and agroforestry species with information on their suitability and the availability of seeds. Prior to this project, GIZ, in collaboration with MAF, had implemented the "Managing Agro-Biodiversity for Sustainable Livelihoods in Timor-Leste" project. Under this project, a survey on agrobiodiversity in 26 pilot sites resulted in a database of more than 500 different species and varieties used by Timorese farmers. This represents a good starting point for the GEF project in terms of developing a database and information system on, e.g., traditional knowledge, species, local varieties and cultivars, and potential for further development.

56. *Conservation International* (CI) is implementing several initiatives that support the objectives of this project. In particular, CI is conducting biological surveys in several sites (both marine/coastal and terrestrial) across Timor-Leste. Specifically, CI is implementing the CEPF-funded project "Building Capacity for Management and Monitoring of Timor-Leste's Protected Areas", which is providing training in applied biodiversity science to government counterparts in the Ministry of Agriculture and Fisheries and community and NGO partners, leading rapid biological surveys of three protected areas (Mt. Maurei, Mt. Legumau, and Mt. Fatumasin), and preparing a protected area management plan in Mt. Maurei. This project will lead into a larger GEF-funded project on the protected areas network (see following section). CI also is conducting surveys and working on community-based natural resources management in Nino Konis Santana National Park and Atauro Island, among other sites.

57. CI has been providing support to MAF in establishing MOUs with foreign research institutions that would like to conduct surveys and collect specimens in Timor-Leste. On behalf of the government of Timor-Leste, CI also supported the preparation of "Guidelines for Establishing Co-Management of Natural Resources in Timor-Leste"[37], which are expected to be signed as a ministerial diploma and can serve as a reference for the development of model Community Protocols under this project.

[37] Coral Triangle Support Partnership, 2013. Guidelines for Establishing Co-Management of Natural Resources in Timor-Leste.

Private Sector

58. Private sector support to sustainable utilisation of biological and genetic resources is still limited in Timor-Leste. A few *Small and Medium Enterprises (SMEs)* – including Acelda and Peoples Trade Company, two agri-business firms in Timor-Leste – have supported the development and marketing of local products such as cassava chips, organic colorant, native rice varieties, herbal tea and coconut oil.

59. Interest to provide co-funding and technical services to the GEF project has been expressed – and confirmed during the project preparation phase – by the Japanese firm *Nimura Genetic Solutions (NGS)*, based on similar successful programme support ongoing in Bhutan, Malaysia and more recently in Myanmar for capacity building, investments and transfer of technology in bio-prospecting. The 'on-the-ground' partnership for bio-prospecting work conducted in Malaysia (including testing of PIC, MAT etc.), as well as its national ABS framework, is regionally known as one of the most advanced and applied.

i) In Malaysia, NGS's collaboration and support to the Forest Research Institute Malaysia (FRIM) as well as the Sarawak Biodiversity Centre (SBC) for over 10 years, has yielded over 27,000 potential strains of microbes from both marine and rainforest habitats. Some of these were patented through the World Intellectual Property Organisation, or WIPO (4 patents for antibiotics from soil microbes with FRIM, and 4 patents for luminescent agents from star bugs with Olympus and Perak State Development Corporation). Through the facilitation of NGS with pharmaceutical and chemical companies, this generated royalties of over USD 500,000 to the three collaborating institutes in Malaysia.

ii) Collaboration with the National Biodiversity Centre in Bhutan, financially supported by the GEF 5 Nagoya Protocol Implementation Fund, involves collaborative research on the screening of biological resources since 2009 with an estimated value of USD 500,000 cash co-funding brought in. More recent collaboration with Quantum Pharmaceuticals Limited involves scoping research, product development and technology transfer for pain relief herbal products in Bhutan. The transfer of the material will be/has been done on execution of a Material Transfer Agreement. Based on the scoping results, a PIC/MAT agreement will follow to secure fair and equitable sharing of benefits for the communities, the Quantum Pharmaceuticals Limited company as well as the User. An initial market assessment was also due to be carried out.[38]

iii) NGS also provided financial and technical support in setting up and running 4 bio-prospecting laboratories in Malaysia and Bhutan, for microbial research and basic bioassays, as well as chemical extraction from plant materials. Most recently, NGS started work on a similar type of collaboration in Myanmar. NGS also works with JICA to support laboratory capacity development for bio-prospecting in African countries.

Gaps

60. As explained in Section 2.3, the gaps in the baseline investment are primarily linked to (i) the absence of a regulatory and institutional framework, as well as relevant model agreements; (ii) the lack of capacity and understanding to implement ABS measures among the relevant agencies; (iii) the limited knowledge of biological and genetic resources in the country that may be of interest for bio-prospecting; and (iv) the lack of practical experience and field investigations in genetic resources and traditional knowledge.

61. In the absence of the GEF project, the country will likely face a continued weak regulatory basis, a lack of additional justification/motivation and funding for biodiversity conservation, continued misuse/biopiracy related to access to genetic resources by national and international research agencies

[38] See recent communication by the Prime Minister's Office of Bhutan (https://www.facebook.com/PMOBhutan/posts/1574999269279437).

and companies, an absence of benefits for communities, and missed opportunities for new biodiversity-based enterprise development, contributing to sustainable development.

2.7 Linkages with other GEF and non-GEF interventions

62. The GEF has supported two projects that precede and provide a springboard for the present project. One of these projects is the Support to GEF Eligible Parties (LDCs & SIDs) for the ***Revision of the NBSAPs and Development of Fifth National Report to the CBD - Phase II***. This project commenced in 2011 and completed the revised NBSAP in February 2015 along with the fifth National Report to the CBD. The other project is the completed UNEP-GEF-ASEAN Project ***Building Capacity for Regionally Harmonized National Processes for Implementing CBD Provisions on Access to Genetic Resources and Sharing of Benefits***[39]. In Timor-Leste, this project focused on promoting awareness and capacity building on ABS. It generated multi-stakeholder interest in the concept of ABS and also provided background reviews of the legislative and regulatory requirements for its implementation. The main findings from these activities have been incorporated in the background review for this document and also in the design of the increment in the alternative scenario, including continuing collaboration with the key national partners under this project.

63. The proposed project will run in parallel with the GEF-funded project ***Securing the long-term conservation of Timor-Leste's biodiversity and ecosystem services through the establishment of a functioning National Protected Area Network and the improvement of natural resource management in priority catchment corridor***, to be executed by Conservation International through MAF and MDIR. The project will aim to establish a functional National Protected Area Network, including through PES mechanisms to monetarise the protection and sustainable utilisation of genetic resources, as well as its output on business plans for protected areas, which could include national modalities for access to and development of genetic resources held in these high biodiversity areas. The project also aims to strengthen the management of catchment areas as pilot sites to demonstrate how to manage protected areas and corridors outside PAs, by building the capacity of local communities to manage their own resources in accordance with the collaborative management requirements of the country. The proposed ABS project will extend the knowledge base upon which this PA project is to be built, incorporating traditional knowledge and providing incentives for a national biodiversity conservation strategy that recognizes the need for sustainable use of the intrinsic values of land and ecosystems as a complement to the PA system.

64. Another relevant GEF project is the USD 1.45 million GEF-UNDP project on ***Strengthening targeted national capacities to improve decision-making and mainstream global environmental obligations into national development priorities***, starting in 2018. This Cross-Cutting Capacity Development (CCCD) project will be executed in collaboration with MDIR and has several linkages with the GEF ABS project. In particular, the project aims to strengthen systems and processes for managing key environmental data and information across key ministries, to enhance coordination of technical directorates, to mainstream global environmental obligations into sectoral policies and programmes, and to enhance public awareness of the value of the global environment and the Rio Conventions. The ABS project will coordinate closely with this project, in particular with regard to the development of information management systems, capacity building, awareness raising on the Rio Conventions – specific to ABS, and the legal and regulatory framework.

65. Timor-Leste is currently involved with two Large Marine Ecosystem (LME) projects with GEF support: the ***Indonesian Seas LME project***, which covers the northern waters of the country and is just beginning implementation; and the second phase of the ***Arafura and Timor Sea (ATSEA)*** project, which covers the southern waters and has been approved for implementation. Both of these initiatives provide a forum

[39] Gusmao, Marcal 2014. Building Capacity of regionally harmonized national processes for implementing CBD provisions on access to genetic resources and sharing of benefits – Timor-Leste. UNEP-GEF-ASEAN Completion Report and Appendices

for work on transboundary marine issues, with the objective of ensuring ecosystem-based management and conservation and use of biodiversity and fisheries through the implementation of regional Strategic Action Programmes (SAPs). The activities of the LME projects to assess coastal and marine biodiversity resources will contribute to the consolidation of information on biodiversity and genetic resources proposed under the ABS project.

66. In collaboration with MAF, UNDP is implementing the GEF-funded, USD 7 million project *Building Shoreline Resilience of Timor-Leste to Protect Local Communities and their Livelihoods* (2016-2019). The project aims to strengthen resilience of coastal communities by the introduction of nature-based approaches to coastal protection. In particular, it will implement extensive mangroves and coastal wetlands ecosystem protection and restoration interventions while strengthening alternative livelihoods options and integrated approaches to coastal adaptation to protect the coastal communities and productive lands. In addition, UNDP is providing *Green Climate Fund (GCF) Readiness* support to Timor-Leste through the National Directorate for Climate Change.

67. Another GEF-funded project implemented by UNDP in Timor-Leste is the USD 5.25 million project, *Strengthening Community Resilience to Climate-induced Disasters in the Dili to Ainaro Road Development Corridor* (2014-2019). The project is implemented in collaboration with MAF and the Ministry of Social Solidarity, and aims to protect critical economic infrastructure from climate induced natural hazards through improved policies, strengthened local disaster risk management (DRM) institutions and investments in risk reduction measures within the road corridor, with the objective of sustaining human development.

68. In addition, the regional GEF *Dugong and Seagrass Conservation Project* commenced implementation in 2016 through MDIR and MAF in partnership with the Ministry of Tourism, the CSO Blue Ventures and Conservation International. The project aims to enhance the effectiveness of seagrass ecosystems supporting globally significant populations of dugong, focusing initially on Atauro Island. This is the first project of a continuing association between Blue Ventures and Timor-Leste and will provide essential support in terms of technical assistance and capacity building in relation to the conservation and sustainable use of marine biodiversity.

69. The Australian Government and the *Australian Centre for International Agricultural Research (ACIAR)* are supporting several programmes in Timor-Leste, in particular with a focus on improving food security and smallholder and community livelihoods. Funded by ACIAR, AI-Com is a collaborative research programme between the Timor-Leste Ministry of Agriculture and Fisheries, the National University of Timor-Leste, World Vision Timor-Leste and the University of Western Australia. AI-Com aims to improve agricultural productivity and profitability in communities in Timor-Leste by (a) addressing technical and social impediments to annual crop intensification; and (b) establishing fodder tree legumes and sandalwood as sustainable options for income and land management. AI-Com is supporting research on Sandalwood and associated host species and, among others, is looking to identify tree varieties with higher oil concentrations.[40] ACIAR also works on building individual and institutional research and development capacity within MAF and UNTL. Previously, Australia had supported the Seeds of Life programme from 2000 to 2016, which focused on evaluating and distributing higher yielding varieties of food crops grown in Timor-Leste and on providing the country's farming families with secure and timely access to quality seeds. The Australian Government is also funding the "TOMAK – Farming for Prosperity Program" in Timor-Leste, an investment in the agriculture and food security sector with an estimated budget of A$25million over five years from 2016 to 2021. TOMAK's goal is to enable rural households throughout "Inland watersheds" with a total population of 146,000, to live more prosperous and sustainable lives. With support to agricultural value chains in a wide range of crops and

[40] Tony Page, Mario Sacaio, Luis Almeida, Luis da Costa Patrocinio, Ida Pereira and Robert Williams (2018). *Sandalwood Production and Hosts in Timor-Leste.* Technical Note for ACIAR project CIM/2014/082. Australian Centre for International Agricultural Research, Canberra.

commodities, TOMAK will link farming households and groups to markets and income generating opportunities. It will also promote the production and consumption of nutritious foods, contributing to healthy diverse diets for Timorese. The ABS project will engage with these projects in particular for their knowledge and research on native tree and crop varieties; as well as market access on any biodiscoveries made under the GEF project.

70. The *USAID AVANSA Agrikultura* project is a five-year (2015-2020), USD 19.2 million project designed to accelerate inclusive growth through increased productivity and profitability of the horticultural food chain by expanding market linkages and supporting economic growth, working with farmers, buyers and communities to improve income, nutrition and women's empowerment. It has four primary components: (a) strengthening the horticulture value chain; (b) improving natural resources management; (c) improving nutrition and livelihoods; and (d) transitioning subsistence farmers to commercial growers. Interestingly, the AVANSA project has identified a local chili variety that is of interest to China and Japan for its use as medicine, and they are promoting the production and market linkages for this crop. The ABS project will engage with this project in particular for its knowledge on native tree and crop varieties.

71. MAF is currently preparing the implementation of the USD 21 million *Sustainable Agriculture Productivity Improvement Project (SAPIP)*, funded through the Global Agriculture and Food Security Program (GAFSP), with World Bank funding. The project aims to enhance income and food/nutrition security through investments in increasing agricultural productivity, empowering farmers and linking them to markets, strengthening adaptive research and extension institutions, reducing risk and vulnerability, improving non-farm rural livelihoods, and strategic use of technical assistance. The project also intends to establish a Timorese Institute of Agricultural Research under MAF, under which a National Laboratory will be established, and to strengthen MAF's existing *in situ* research centres. The National Laboratory is anticipated to be operational in around two years. The GEF ABS project will seek coordination with this project, in particular with regard to its research component.

72. With support from the Food and Agriculture Organization of the United Nations (FAO), MAF is also preparing a *National Community Forestry Programme*, which aims to strengthen Community-Based Natural Resource Management (CBNRM) and, among others, to address biodiversity loss and forest degradation. The main expected outcome of the programme is strengthened national forest policy by promoting nation-wide implementation of community forestry. The main beneficiaries will be forest-dependent communities whose livelihoods and income depend on forest resources.

73. *World Vision Timor-Leste* is implementing a range of community-based programs and currently works in Aileu, Baucau, Bobonaro and Dili municipalities. Among other initiatives, World Vision supports the implementation of Farmer-Managed Natural Regeneration (FMNR) in these municipalities. While not directly concerned with genetic resources or biodiversity issues, World Vison's projects have potential linkages with the GEF ABS project through their focus on community rights and access such as (land) resource ownership and advocacy on behalf of rural people. Through their established relationships with local communities, World Vision will be consulted as a stakeholder for the development of model Community Protocols and the outreach and awareness raising activities. World Vision could also be involved for facilitating access to communities if additional survey sites are needed.

74. *With One Seed* is the first Gold Standard verified carbon forestry program in Timor-Leste. It is working with subsistence farming communities, in particular in Baguia community, Baucau municipality, to replant their forests thereby creating a carbon store to build local economies. It also delivers practical education and training in agroforestry and permaculture. With One Seed will be consulted as a stakeholder for the development of model Community Protocols and other project activities.

75. The *Critical Ecosystem Partnership Fund (CEPF)* currently funds three projects in Timor-Leste linked to biodiversity surveys, capacity building and conservation.

i) The first one, “Building Capacity for Management and Monitoring of Timor-Leste’s Protected Areas”, is implemented by Conservation International (see previous section). The project is providing training in applied biodiversity science to government counterparts in the Ministry of Agriculture and Fisheries and community and NGO partners, leading rapid biological surveys of three protected areas (Mt. Maurei, Mt. Legumau, and Mt. Fatumasin), and preparing a protected area management plan in Mt. Maurei.

ii) Second, the Coral Triangle Center (CTC) is implementing the project “Establish and Scale-up Atauro Island Marine Protected Area, Timor-Leste”. The project works with local partners to create a series of five marine protected areas (MPAs) surrounding the island and to create a functioning MPA network. As part of this effort, CTC is undertaking a large awareness campaign to sensitize local communities to the value of their marine resources.

iii) Third, Centro de Desenvolvimento Comunitario is implementing the project “Conservation, Agriculture, and Reforestation Training in Mundo Perdido Key Biodiversity Area of Timor-Leste”. This project is working in the Mundo Perdido KBA, a mountainous area straddling the Baucau and Viqueque municipalities within Venilale and Ossu administrative posts of Timor-Leste. CDC is training farmers in sustainable agriculture practice, leading reforestation activities, and increasing environmental awareness.

76. Because MDIR and/or MAF are a collaborative partner in all of these projects, coordination will be led through these agencies, which are already working closely on projects with the University Centres and Faculties, Conservation International, Blue Ventures, UNDP and other partners.

SECTION 3: INTERVENTION STRATEGY (ALTERNATIVE)

3.1 Project rationale, policy conformity and expected global environmental benefits

Project rationale

77. Timor-Leste takes a specific position in the Asia Pacific region in largely lacking a national system and the needed institutional capacity for a regulatory framework on ABS. It also lacks a centralised data inventory for biodiversity and genetic resources. Furthermore, Timor-Leste currently does not have an adequate mechanism to capture the important knowledge of the natural biodiversity held by the country – specifically by its rural people. Much of the existing biodiversity information, records and publications, including traditional knowledge and potential genetic resources, is held by foreign institutions – largely due to its long colonial occupation by Portugal and Indonesia. Existing national databases are incomplete and scattered over various institutions. The country, therefore, has not yet realised the potential benefits of biodiversity and genetic resources towards meeting national development goals.

78. As a first step, the project will, therefore, establish the national regulatory and institutional framework for ABS – by developing the necessary regulations, guidelines and protocols, but also by building awareness and capacity as well as high-level support from policy makers and parliamentarians for acceding to the Nagoya Protocol. Once adopted, the framework will provide the necessary governing regulations and procedures for ABS implementation, and thereby provide legal clarity on access to genetic resources and benefit sharing in Timor-Leste. Second, the project will develop the country's capacity for research and monitoring of biological and genetic resources through the establishment of a national database and the development of international partnerships for collaborative survey and data exchange programs.

79. In addition, in order to obtain adequate central government support for acceding to the Nagoya Protocol, it will be key to demonstrate the potential benefits of genetic resources for national sustainable development. The project will, thus, aim to stimulate research and business interests by building capacity and starting (even modest) pre-investments in biodiversity research, bio-prospecting and product development. Timor-Leste, as a young state, is still fully in a transitional phase where this multipronged approach of the project is an important GEF incremental support to enable it to proceed towards both accession to the Nagoya Protocol, as well as the development of the national regulatory and institutional framework for ABS. Whilst the administrative framework established under Component 1 will be conditional as well as underpin the activities under Component 2, these activities will also cycle lessons learned back into the review and refinement of the administrative framework for ABS.

80. Bio-prospecting activities can theoretically contribute to sustainable development by providing incentives for conservation while developing technological capabilities that enhance long-term opportunities for economic growth. Countries seeking to derive significant benefits from their biological resources must develop capabilities to provide value-added combinations of biological material, associated knowledge, and technical services. This requires moving beyond a gatekeeping or 'controlling through regulations only' approach to access and benefit sharing, toward a more comprehensive strategy focusing on benefit creation and partnership building[41]. The importance of this issue is underscored in Article 23 of the Nagoya Protocol on 'Technology Transfer, Collaboration and Cooperation', as well as Article 10 of the CBD, which calls upon each contracting party to "encourage cooperation between its governmental authorities and its private sector in developing methods for sustainable use of biological resources".

[41] Artuso, 2002, Bioprospecting, Benefit Sharing, and Biotechnological Capacity Building. In: World Development Vol. 30, No. 8, pp. 1355–1368

Project conformity

81. The project is consistent with Objective 3, Program 8 of the GEF 6 Biodiversity Strategy. It will contribute to the expected outcome of Program 8, as follows.

GEF-6 Biodiversity Results Framework		
Focal Area Objective	Program	Expected Outcome and Indicator (and project contribution to indicator)
Objective 3: Sustainably use biodiversity	Program 8: Implement the Nagoya Protocol on ABS	*Outcome 8.1:* Legal and regulatory frameworks, and administrative procedures established that enable access to genetic resources and benefit sharing in accordance with the provisions of the Nagoya Protocol *Indicator 8.1:* National ABS frameworks operational score. *Project contribution to indicator:* It is anticipated that the project will lead to an increase of at least 10 points in the overall ABS score for Timor-Leste (from a baseline of 4 points).

82. The project also supports the following Aichi Biodiversity Targets.

i) Target 1: By 2020, at the latest, people are aware of the values of biodiversity and the steps they can take to conserve and use it sustainably.

ii) Target 16: By 2015, the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization is in force and operational, consistent with national legislation.

iii) Target 19: By 2020, knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are improved, widely shared and transferred, and applied.

83. The project will assist Timor-Leste in delivering Sustainable Development Goal 15, Target 6, which is to ensure fair and equitable sharing of the benefits arising from the utilization of genetic resources, and promote appropriate access to genetic resources.

84. The project is also in line with the United Nations Development Assistance Framework (UNDAF) 2015-2019 for Timor-Leste. In particular, it supports the following outcome and sub-outcome:

> **Outcome 1:** People of Timor-Leste, especially the most disadvantaged groups, benefit from inclusive and responsive quality health, education and other social services, and are more resilient to disasters and the impacts of climate change.
>
> **Sub-Outcome 1.4:** People of Timor-Leste, particularly those living in rural areas vulnerable to disasters and the impacts of climate change, are more resilient and benefit from improved risk and sustainable environment management. […] The United Nations System will […] build capacity for

regionally harmonized national processes for implementing CBD provisions on access to genetic resources and sharing of benefits.[42]

Expected global environmental benefits

85. The project will generate global environmental benefits by supporting the fair and equitable sharing of benefits arising from the utilization of genetic resources, and by enabling appropriate access to genetic resources, in Timor-Leste.

86. In doing so, the project will – together with other initiatives – help Timor-Leste to address the threats to globally significant biodiversity and ecosystem services by promoting ownership of the biodiversity in the ecosystems, and linking this, through awareness raising and potential opportunity, to incentives for action by local stewards such as local government, protected area managers or rural communities. The project will expand knowledge of biological diversity; encourage and support the preservation of associated traditional knowledge; establish a management framework for access and benefit sharing of genetic resources; and build new capacity to assess, store and access biodiversity knowledge. It will also promote bio-prospecting of potentially commercial genetic resources and in so doing, reinforce the recognized value of biodiversity and genetic resources for local livelihoods and the development of commercial products. It will thereby provide policy makers and local resource owners/users with clear incentives for protecting these resources and the habitats that sustain them.

87. By focusing on the demonstration of the value of biodiversity resources in areas outside of the existing protected area network, the project will also strengthen the argument for conserving biodiversity in production landscapes and seascapes, and generate incentives to biodiversity conservation in protected areas as well as in community-managed land. As a result, the project will help Timor-Leste to reduce the loss of globally significant biodiversity[43] in forest ecosystems from land conversion, habitat degradation, soil loss and exotic species invasion; in river systems from habitat degradation due to erosion, sedimentation and changed hydrological cycles; in wetlands from sedimentation and exotic species invasion; and in coastal and marine environments through sedimentation and pollution. In addition, the knowledge and professional capacity established under the project will be an asset not only to Timor-Leste, but also to other countries in the region such as Indonesia, while expanding opportunities for concerted regional responses to biodiversity conservation in Indonesia, Timor-Leste and Australia, which are already engaged in management of trans-border conservation projects.

3.2 Project goal and objective

Project goal / impact

88. The project goal is to enhance the conservation and sustainable use of biodiversity through the effective implementation of the Nagoya Protocol in Timor-Leste.

Project objective

89. The project objective is to establish the conditions enabling sustainable access to the genetic resources of Timor-Leste, which will deliver fair and equitable benefits to its people, while protecting legal and customary ownership and traditional knowledge.

[42] United Nations Development Assistance Framework (UNDAF) 2015-2019 for the Democratic Republic of Timor-Leste: Supporting Equitable and Sustainable Development in a Rising Young Nation (2015).
[43] As noted earlier, ecosystems within the Wallacea region demonstrate high levels of endemism and species richness, so that reductions in biodiversity loss are globally significant.

3.3 Project components and expected results

90. To achieve the project objective, the project's interventions have been organised into two components. Each component is divided into two outcomes.

- Component 1: Establishment of national legal and institutional framework on ABS, including Traditional Knowledge.
    i. Outcome 1.1: National legal and institutional framework on ABS and the protection of traditional knowledge developed and facilitated towards adoption in accordance with the Biodiversity Decree Law.
    ii. Outcome 1.2: Increased awareness and capacity of national stakeholders on ABS principles, economic potential and procedures under the Nagoya Protocol and the national framework.
- Component 2: Operationalisation of the Nagoya Protocol on research and monitoring for sustainable utilisation of genetic resources.
    i. Outcome 2.1: Institutional capacity enhanced for enacting Article 17 on 'monitoring' and Articles 8a & 23 on 'promoting research' for sustainable use through consolidation of inventory, cataloguing and fair access to national and internationally held records on biodiversity, genetic resources and traditional knowledge of Timor-Leste.
    ii. Outcome 2.2: Enhanced technological and business capacity for bio-prospecting[44] in Timor-Leste, in compliance with the Nagoya Protocol on sustainable utilisation of genetic resources.

91. The outputs and activities under each of the four outcomes are described in more detail below. The detailed Results Framework and Work Plan can be found in Appendix 3 and 4, respectively.

Component 1: Establishment of national legal and institutional framework on ABS, including Traditional Knowledge.

92. This component has two targeted outcomes, the first related to 'a national legal and institutional framework on ABS', and the second one towards 'increased awareness and capacity of national stakeholders on ABS principles, the Nagoya Protocol and the national framework'.

Targeted Outcome 1.1: National legal and institutional framework on ABS and the protection of traditional knowledge developed and facilitated towards adoption in accordance with the Biodiversity Decree Law.

Output 1.1.1: National regulatory, policy and institutional framework developed and facilitated towards adoption by the government for implementation of the Nagoya Protocol through a process of national consultations, a government brief and National Operational Guidelines.

Lead: MDIR (with consultants)

Timeline: Year 1 for development, Years 2-3 for facilitating adoption (see Appendix 4 for detailed timetable)

93. Through Output 1.1.1, the project will design, facilitate and start implementation of the national policy/regulatory and institutional framework to support implementation of the Nagoya Protocol. To begin, the project will establish a task force for the development of the national framework, involving MDIR, MAF, UNTL, the Ministry of Health, Conservation International and a local NGO/community representation[45]. In addition, an agreement will be established for the project implementation between MDIR, MAF and the Ministry of Health, and sub-contracts will be signed with UNTL and Conservation

[44] See definition in Footnote 2.
[45] The task force will also ensure close coordination with the policy component of the GEF-UNDP Cross-Cutting Capacity Development (CCCD) project starting in 2018.

International. Under the guidance of the task force, a national and an international ABS expert will then carry out a gap analysis of the existing legislative framework related to ABS, including an analysis of local level legislation, followed by the actual drafting of the required regulatory and institutional framework required to successfully start implementing various provisions given in the Nagoya Protocol. This will build on the previous assessments and the regulatory scheme proposed in earlier reports (see Footnotes 27 and 65), and will take into consideration the current legislation (in particular, the recently enacted Biodiversity Decree Law, the General Forestry Regime, the National Seed Policy and the Special Regime for the Ownership of Immovable Property). It will also take into consideration existing policies and procedures of the MAF and other ministries, and the potential future accession by Timor-Leste to the ITPGRFA. Approval and monitoring processes should be designed as simple and effective as possible.

94. Still under Output 1.1.1, the project will provide technical assistance and facilitate engagement of government, civil society and private sector stakeholders to produce a government brief that will set out needed policies, governing regulations and administrative procedures specific to ABS for Timor-Leste. The government brief will outline the costs and benefits of ABS implementation for Timor-Leste, with a focus on highlighting the economic potential and value of genetic resources and associated traditional knowledge for the country's sustainable development agenda (based on experience from other countries). It will also explain the linkages of the national ABS framework with the Biodiversity Decree Law (which already includes clauses related to ABS) and as such minimise political risks and objection in moving towards Timor-Leste's accession to the Nagoya Protocol. Through its national consultative process as well as the contents and guidance of the government brief, the project will reinforce the institutional framework for ABS by assisting in the designation of a Competent National Authority (CNA), a National Focal Point (NFP), and technical sector agencies that will act as Competent Sector Authorities (CSAs) in line with their mandates[46]. The project will help clarify roles and responsibilities of the CNA and CSAs, to be decided through a broad national consultative process and in accordance with applicable national legislative, administrative or policy measures specific for the mandates of the agencies and sector programs.

95. To enable capacity building as well as implementation of the ABS framework, the project will develop National Operational Guidelines for CNA and CSAs, providing clear guidance on the relevant procedures for ABS implementation, including on traditional knowledge, PIC and MAT, Community Protocols, monitoring, stimulation of research partnership and related investments etc. Throughout the process, the project will aim to ensure that the policies and model agreements take into account the specific needs and priorities of local communities, in particular women, and that any benefits from ABS are available to both women and men.

96. The analysis of the experience gained through other project activities, specifically the development of protocols, model agreements (Outcome 1.1), the data inventories for genetic resources and traditional knowledge (Outcome 2.1) and the 'proof-of-concept' bio-prospecting demonstration activities (Outcome 2.2), will provide opportunities for industry and civil society to comment on the effectiveness of the legal, regulatory and institutional framework in delivering incentives and livelihood benefits. The framework should be flexible enough to be able to incorporate lessons learned from the implementation at a later stage.

[46] The draft regulatory scheme proposed in the assessment conducted under the UNEP-GEF Regional ABS Project (see Footnote 65) suggested to establish a central or coordinating Competent National Authority (CNA), which is likely going to be MDIR-Biodiversity Directorate, as well as one or more delegated national competent authorities (Competent Sector Authorities, or CSAs). These CSAs could include, for instance, MAF-Forestry Directorate for permits related research in protected areas, MAF-Fisheries Directorate for permits related to research on fisheries, and the Ministry of Health for permits under their mandate (e.g., pharmaceutical products). The details will be elaborated during the project implementation.

Output 1.1.2: Nationally agreed model Community Protocols developed based on local indigenous practices, beliefs and customary law to guide access to traditional knowledge associated with genetic resources.

Lead: Conservation International

Timeline: Year 1 for development, Years 3-4 for review and facilitating adoption

97. Project policy for ABS policies and regulations will be especially important with regard to local level dimensions. Under Output 1.1.2, with guidance from the project team, CI will analyse local government by-laws at the *Suco* and the *Aldeias* level, as well as community customs and practices in two pilot communities with respect to their relevance for the national ABS framework. The two pilot communities will comprise one terrestrial site in Baucau and one marine/coastal site on Atauro Island, which will also be the two selected sites for the field surveys under Outcome 2.2 (see Section on 'Field sites for surveys under Outcome 2.2' below).

98. In consultation with local stakeholders (community leaders and *Suco* councils, community members including women, men and youth, resource users, local businesses, administrative posts) in the two pilot communities, CI (with MDIR, MAF and UNTL staff) will draft model Community Protocols[47] to outline a process for obtaining Prior Informed Consent and access to traditional knowledge that is in line with local socio-cultural conditions. These model Community Protocols will be drafted as part of the national obligation under Article 12 of the Nagoya Protocol on the protection, access to and benefit generation to local resource holders of traditional knowledge. Timor-Leste has strong and long-standing local customs and local by-laws, which need to be considered and incorporated in any national framework enabling the implementation of the Nagoya Protocol. The Community Protocols will be drafted based on experience from other countries (made available by UN Environment through former or ongoing GEF ABS projects), and using the Timor-Leste "Guidelines for Establishing Co-Management of Natural Resources in Timor-Leste" as a model. They should take into account the specific needs and priorities of local communities, in particular women. An independent legal expert will be made available to the communities by the project team to provide independent advice and guidance to the communities. A provision has been made in the project budget to fund this expert[48].

99. In Year 3, the project will review and, as needed, revise Community Protocols based on the lessons learned from the activities implemented under Outcome 2.2. The project will also work towards the adoption of the model Community Protocols as integral element of the national, formally agreed ABS framework and procedures. The Community Protocols should be flexible enough to be able to incorporate specificities of different ethnic groups when applied to different communities.

Output 1.1.3: National specific ABS model agreements (PIC, MAT) developed that facilitate the negotiation of monetary and non-monetary benefits between users and providers of genetic resources.

Lead: MDIR (with consultants)

Timeline: Year 1-2 for development, Years 3-4 for facilitating adoption

100. One of the critical functions of the Competent National Authority (CNA) will be the promotion and monitoring of a nationally consistent and integrated approach to PIC (Prior Informed Consent) and MAT (Mutually Agreed Terms) procedures. Under Output 1.1.3, with the guidance of the task force and based on inputs from relevant stakeholders (government, civil society, academia, community representation

[47] "Community protocols are instruments embodying protocols, procedures, rules and practices, existing in both written and unwritten form, developed and used by ILCs in numerous contexts, such as interactions with their ecosystems, interactions within and between ILCs themselves, and in their interactions with external actors." UNEP and EDO NSW (2013). *Community Protocols for Environmental Sustainability: A Guide for Policymakers.* UNEP, Nairobi and EDO NSW, Sydney.

[48] In the contract it will be specified that the payment of the expert, though contingent on the amount of work undertaken, will not depend on the outcome of the community consultations, i.e. community providing PIC or MAT.

and private sector), the national and the international ABS expert will develop model agreements (PIC, MAT) that facilitate the negotiation of monetary and non-monetary benefits between users and providers of genetic resources (for commercial and non-commercial uses). As a first step, the project will focus on the PIC/MAT needed for two pilot communities under Outcome 2.2. The model PIC/MAT will be drafted with guidance from UN Environment and NGS based on experience from other countries (e.g., India and Malaysia) and based on existing materials such as the ABS Management Tool. The model agreements should take into account the specific needs and priorities of local communities, in particular women, and ensure that any benefits are available to both women and men. The agreements should also ensure the respect of any (individual and community) property rights.

101. The project will subsequently develop model agreements for specific areas, such as cultivated plants, wild plants and animals, medicinal / cosmetic / industrial biological extractions, etc. The project will then hold a consultation workshop to discuss and finalise the model agreements, and work towards the adoption of the ABS model agreements (PIC, MAT) as integral element of the national, formally agreed ABS framework and procedures.

Output 1.1.4: High-level dialogue established with policy makers and Parliament to make the case for the Nagoya Protocol and the national ABS framework, emphasising their potential for adding value through research & development, and their contribution to the Sustainable Development Goals (SDGs).

Lead: MDIR

Timeline: Years 2-4

102. Importantly, the drafting and consultative process towards the national ABS framework as well as the government brief (see Output 1.1.1) will be the essential mechanism to engage and convince central government decision makers to accede to the Nagoya Protocol, and to adopt the national regulatory and institutional framework needed for the implementation of the Protocol. Under Output 1.1.4, the project will organise regular high-level consultations such as seminars and outreach sessions with parliamentarians and policy makers, in order to build the case for the accession to the Nagoya Protocol, for adopting the national ABS framework as well as allocating funding for ABS implementation. This will be done by:

    - Using the awareness materials developed under Output 1.2.1.
    - Discussing the information presented in the government brief (see Output 1.1.1), which outlines the proposed national ABS framework and the costs and benefits of ABS implementation for Timor-Leste, and highlights the economic potential and value of genetic resources and associated traditional knowledge for the country's sustainable development agenda through collaboration with international partners and the private sector in commercial and non-commercial research.
    - Presenting the results of the report on bio-prospecting opportunities elaborated under Outcome 2.2.
    - Inviting speakers from other countries in the region (e.g., Malaysia, India, Indonesia) to present their experiences with ABS implementation to policy makers in Timor-Leste.

103. Besides benefitting greatly from the institutional capacity building to be conducted under Outcome 1.2 and the guidance provided through the government brief, willingness for acceding to the Nagoya Protocol will be greatly enhanced through the promotional effect received from the 'proof-of-concept' through the bio-prospecting and (facilitation for) marketing work under Outcome 2.2, in collaboration with the private sector and national research agencies.

Output 1.1.5: Information required for formal accession to the Nagoya Protocol made available to the Government of Timor-Leste and accession process started.

Lead: MDIR (with consultants)

Timeline: Years 2-4

104. Finally, under Output 1.1.5, the national and the international ABS expert will support the Government of Timor-Leste with the consolidation of information required for the formal accession to the Nagoya Protocol, including the compilation of documents, data, and conducting training and briefing sessions where useful to enable the process.

Targeted Outcome 1.2: Increased awareness and capacity of national stakeholders on ABS principles, economic potential and procedures under the Nagoya Protocol and the national framework.

Output 1.2.1: An outreach and institutional development plan on ABS issues prepared in Tetum language based on needs assessments.

Lead: MDIR (with consultants)

Timeline: Years 1-2

105. The establishment of the national ABS framework will be enabled through outreach and capacity building. As a first step, under Output 1.2.1, MDIR with support of an Outreach and Capacity Building Expert will conduct systemic surveys and hold a consultation workshop to identify stakeholder participation, awareness and capacity building needs, as well as the baseline awareness levels. Based on this, it will establish an outreach and institutional development plan in the Tetum language consistent with Articles 21 and 22 of the Nagoya Protocol. The plan will define actions to build awareness and capacity on ABS issues, tailored to the needs of different stakeholders (government agencies, research institutions/academia, indigenous and local communities, private sector, media; women and youth). The outreach and awareness activities should also help to build awareness among communities on the importance of sharing any benefits among both women and men; and on the important role played by women in preserving and passing on traditional knowledge.

106. The plan is expected to facilitate understanding, willingness and adoption of the ABS legal framework throughout the government and help to consolidate policies, directives, as well as make the case on the economic potential and value of genetic resources and associated traditional knowledge for the country's sustainable development agenda (based on experience from other countries). The links between ABS and biodiversity conservation, as well as its contribution to sustainable development, should be made explicit. The project will coordinate closely with the awareness and capacity building activities that will be implemented under the GEF-UNDP Cross-Cutting Capacity Development (CCCD) project starting in 2018.

107. Based on the plan, the project will prepare training and awareness materials in the Tetum language (by reviewing and updating materials from previous projects and making use of the ABS Management Tool[49] as well as the National Operational Guidelines and the government brief developed under Outcome 1.1). The materials should be tested with targeted stakeholders (women, men and youth) before being finalised. The outreach materials should help to build the case on the benefits of bio-prospecting, product development and marketing, in order to inform and help to convince parliament to invest in ABS as well as support the accession to the Nagoya Protocol.

[49] Geoff Burton and Jorge Cabrera, 2012: ABS MANAGEMENT TOOL – Best Practice Standard and Handbook, Implementing Genetic Resource Access and Benefit-Sharing Activities.

Output 1.2.2: National outreach campaign implemented on the provisions of the Nagoya Protocol, the evolving national ABS framework, and the role of ABS for genetic resource-based innovation and adding value in meeting the SDGs

Lead: MDIR (with consultants)

Timeline: Years 2-4

108. Under Output 1.2.2, the project, under the lead of the Outreach and Capacity Building Expert and involving relevant staff of MDIR, MAF and UNTL, will implement the outreach and awareness activities as defined in the outreach and institutional development plan. The target is to have at least 50 stakeholders expressing an increased level of awareness and understanding of the provisions, opportunities and requirements under the Nagoya Protocol, including on traditional knowledge, at the end of the project. The project will assess the levels of awareness through a survey at inception and end-of-project.

109. The outreach and awareness activities may include, but are not limited to:

- Establishing/reviving a national multi-stakeholder network on ABS with political, civil society and industry leaders as well as local representatives;
- Establishing a Biodiversity Working Group to discuss and follow up on activities related to biodiversity, including genetic resources;
- Outreach sessions with parliamentarians and policy makers (see Output 1.1.4);
- Distribution of leaflets to raise awareness of ABS among different sector agencies and other stakeholders;
- Information sessions for local stakeholders, in particular facilitating the participation of women and youth, and preparing and facilitating for community engagement towards the development of Community Protocols, PIC/MAT and traditional knowledge inventories under Outcomes 1.1. and 2.2;
- Broadcast on national television or radio stations;
- Workshops for local media and small and medium enterprises; and
- Distribution of education materials at seminars and conferences.

Output 1.2.3: Targeted training carried out for 50 staff of the Competent National Authority, the Competent Sector Authorities, the National Focal Point and related research agencies on national institutional, regulatory and implementation framework for ABS.

Lead: MDIR (with consultants and project partners)

Timeline: Years 2-4

110. Once the national competent agencies have been identified and the national coordination mechanism agreed upon, institutional and staff capacity will be built under Output 1.2.3, with a minimum of 50 staff of the relevant agencies trained on the formal requirements, best practice and applicable model agreements on institutional, regulatory and implementation framework for ABS in Timor-Leste. Under the lead of the Outreach and Capacity Building Expert and involving relevant staff of MDIR, MAF and UNTL, the project will implement training activities as defined in the outreach and institutional development plan, with a particular focus on building the capacity of women. The project will assess levels of capacity of the targeted stakeholders and institutions at inception and end-of-project.

111. The training activities may include, but are not limited to:

- Training of trainers (TOT) in each agency; these trainers or champions can then provide regular refresher and on-the-job training within their agency.

- Training workshops for different sector agencies and other stakeholders. The agencies should ensure sufficient continuity, as well as broad enough participation in order to minimise risks of staff turnover. Participants will be asked to brief their relevant colleagues after each training workshop;
- Specialised training on specific technical and legal aspects of ABS implementation, including on the use of the National Database and the national ABS Clearing House Mechanism (in collaboration with the partners described under Outcome 2 for the technical aspects);
- Workshops for indigenous and local communities;
- On-the-job training and follow-up, e.g. by supporting the handling of incoming applications for surveys and research programmes by the Competent National Authority (CNA) and the Competent Sector Authorities (CSAs); and
- South-South exchange with other countries in South or Southeast Asia, e.g. India (National Biodiversity Authority), Malaysia, Lao PDR.

112. Towards the end of Year 3, the project will develop measures to ensure that the capacity building activities are sustained after the project ends (e.g., designating champions in each sector agency, allocating budget and adjusting terms of reference of relevant agencies).

Component 2: Operationalisation of the Nagoya Protocol on research and monitoring for sustainable utilisation of genetic resources.

113. This component has two targeted outcomes, firstly, the 'enhanced institutional capacity for monitoring fair access and promoting research for sustainable use of genetic resources', and secondly, 'enhanced technological and business planning capacity for bio-prospecting' (i.e., the screening for and discovery and commercialisation of new products based on biological resources, see Footnote 2). The proposed activities and outputs under this component will help to implement the Nagoya Protocol, specifically related to provisions to be made by countries on monitoring the sustainable utilisation of genetic resources (Article 17) through enhanced access to biodiversity data, inventories and storage in efficient and effective ways, facilitating international collaboration and capacity building (Article 23), as well as towards stimulating and simplifying procedures for non-commercial research through national measures under Article 8.

Targeted Outcome 2.1: Institutional capacity enhanced for enacting Article 17 on 'monitoring' and Articles 8a & 23 on 'promoting research' for sustainable use through consolidation of inventory, cataloguing and fair access to national and internationally held records on biodiversity, genetic resources and traditional knowledge of Timor-Leste.

Output 2.1.1: Consolidated National Database on biodiversity, genetic resources and traditional knowledge, and national ABS Clearing House Mechanism, established.

Lead: MDIR (with technical assistance expected to be provided by MAGNT, the NT Herbarium and CI)

Timeline: Years 1-3 for development, Years 3-4 for training

114. Under Output 2.1.1, the project will support the establishment of a consolidated National Database on biodiversity, genetic resources and traditional knowledge, as well as a national ABS Clearing House Mechanism (CHM). The National Database will act as repository on biodiversity and traditional knowledge and, importantly, will help to guide future research activities in the country (by the project and other interested parties). It will also enable decision-makers to assess the viability and potential impacts of new proposals for using biological resources, and have the background knowledge necessary for the formulation of PIC and MAT arrangements. The national ABS CHM will provide the necessary information on ongoing research and permits granted under the ABS regulations. Both databases will also support the identification of new bio-prospecting opportunities (see Outcome 2.2).

115. As a first step, the project will establish a Memorandum of Agreement between MDIR and MAGNT/NT Herbarium on technical assistance, data exchange and capacity building to support Outcome 2.1, based on the discussions held during the project preparation phase.

116. The concerned agencies (MDIR, MAF, and UNTL with technical assistance by MAGNT, the NT Herbarium and CI) will then discuss and agree on the design of a ***National Database*** on biodiversity, genetic resources and traditional knowledge. The design of the database will be coordinated with any environmental information systems to be developed under the GEF-UNDP Cross-Cutting Capacity Development (CCCD) project[50]. It will also be discussed with the EU/GIZ's Partnership for Sustainable Agro-Forestry (PSAF). The potential integration with the ALGIS system administered by MAF[51], with the future national ABS Clearing House Mechanism, as well as with the CCCB website, will be analysed and discussed. The National Database is expected to have the following sections:

- Virtual library of specimens (including photography/video and GIS data, as well as ethnobotanical information such as traditional uses of the biota);
- Open access research data (e.g., records on plant and animal species, information on traditional knowledge that can be made public, literature references, etc.);
- Restricted access research data; and
- Links to related existing national and international databases.

117. The concerned agencies (MDIR, MAF, UNTL) will also discuss and agree on the design of a ***National ABS Clearing House Mechanism***, with information on the national ABS framework and on permits granted under the ABS regulations, and with different levels of access for different user groups and adequate security protocols (including restricted access for confidential information). The CHM can be finalised only after the national framework has been developed. The design of the ABS CHM will be done with the guidance from UN Environment, the ASEAN Centre for Biodiversity and the CBD Secretariat. The national CHM will be the 'information checkpoint' for monitoring the fair access and sustainable use of genetic resources, in accordance with the institutional framework defined under Outcome 1.1. The possibility of linking this with the national CBD Clearing House Mechanism will also be analysed.

118. The project will ensure that clear responsibilities are established, professional staff assigned and budget allocated for the maintenance and update of the National Database and the national ABS Clearing House Mechanism in the medium and long term, as part of the institutional framework elaborated under Outcome 1.1. It is anticipated that UNTL's CCCB, in close collaboration with the Biodiversity Directorate, will take the lead in hosting the National Database, and in ensuring its long-term sustainability and maintenance after the project ends. The Biodiversity Directorate as the Competent National Authority (CNA) will have the main responsibility for the ABS CHM; the Competent Sector Authorities (CSAs) to be designated under the national ABS framework will be responsible for updating the sections relevant to their mandates.

119. With the technical assistance by MAGNT and the NT Herbarium, an IT company (and/or a database specialist) will then be hired to develop the National Database and national ABS CHM. The IT company, jointly with MAGNT and the NT Herbarium, will also provide on-the-job training on the functional aspects (data entry, maintenance and update) of the National Database and ABS CHM to

[50] It has also been suggested that the National Database on Biodiversity should incorporate information on the characteristics of plants related to climate change adaptation, ecosystem services, etc. (e.g., shade tolerance of a crop variety). This possibility will be explored in collaboration with the partner projects, in particular the Partnership for Sustainable Agro-Forestry (PSAF) and the GEF-UNDP CCCD project.

[51] For geo-referencing, and expanding ALGIS to near coastal zones.

relevant administrators in MDIR/MAF/UNTL. Training on the technical aspects of both platforms is included in Output 1.2.2.

120. The virtual library of specimens could potentially be expanded to include a ***physical repository*** (or a museum or herbarium[52] as well as a gene bank, potentially building on existing plant repositories by MAF) for housing and curating existing and future plant and animal specimens, as was initially foreseen in the PIF. However, due to the challenges of establishing and maintaining such a facility and given the advantages of a digital library, it has been decided during the project preparation phase to focus the project resources on developing the digital database and on building laboratory capacity.

Output 2.1.2: Protocols established for the National Database and the national ABS Clearing House Mechanism on collecting, cataloguing, permitting and monitoring of fair access to scientific records and traditional knowledge in Timor-Leste, and existing information incorporated into the database.

Lead: MDIR (with technical assistance by MAGNT and the NT Herbarium for the development of protocols and technical assistance by UNTL and CI for the collection of existing information on biodiversity and traditional knowledge)

Timeline: Year 2 for development of protocols, Years 2-3 for training, Years 1-4 for collection of existing information and data

121. To support maximising the fair access, proper use and monitoring of records on biodiversity, genetic resources, bio-chemicals and traditional knowledge held in these new information systems, the project will help to develop and disseminate protocols for the collection and documentation of information on biological and genetic resources as well as traditional knowledge. With technical support, training and mentoring provided by CI, MAGNT and NT Herbarium, the project will develop simple protocols on running the National Database and the ABS CHM for:

    a. The collecting, cataloguing, permitting and reporting of digital records of biological and genetic resources;
    b. The conduct of biological surveys (including ensuring that future investigations share reference collections and leave new documentation and benefits in the country);
    c. The documentation of oral history and other approaches to documenting and using traditional knowledge;
    d. The curation of these data in the National Database; and
    e. The operation of the national ABS CHM and monitoring of access permits (see also Output 2.1.1).

122. Standardized protocols will ensure that data is entered into the national database in an accessible and useful form for all stakeholders, as well as forming the basis for promotion and marketing of any special genetic resources, bio-chemical compounds or other characteristics that are emerging from the research. The project will provide on-the-job training to assist key stakeholders, including students, university and government staff, to understand and be able to follow such protocols, which then can be applied more widely through the country. Once formulated and adopted, these protocols, along with the model Community Protocols and PIC/MAT agreements developed under Outcome 1.1, will be made publicly available on the national ABS Clearing House Mechanism.

123. The Biodiversity Specialist (project staff), with support from MDIR, UNTL and MAF, will lead a major effort to collect existing information, publications and other records on biodiversity, genetic resources and traditional knowledge of Timor-Leste and incorporate it into the new database system. The

[52] While developed country museums and herbariums draw their rationale from a heritage of public science and culture, the establishment of new facilities such as in Timor-Leste, may derive greater strength of purpose and sustainability by tying themselves more directly to sustainable development goals and national poverty alleviation objectives. As this institution would be new, it would be most efficient to incorporate herbarium and museum within a single institution following the UK and US national museum models.

priorities for this undertaking will be established in discussion with NGS in order to advance the identification of opportunities for bio-prospecting trials under Outcome 2.2. The focus will be on ethnobotanical information, which is critical to the success of bio-prospecting. The information will be collected from a variety of national and foreign sources, including:

- Previous surveys, reference collections and scientific publications by foreign institutions and researchers, including from Australia, Indonesia, Singapore, Portugal and the Netherlands.
- Specimens held at zoological museums and herbaria collections (e.g. Australia, Indonesia, Singapore, Portugal and the Netherlands);
- Data collected under past and ongoing projects such as GIZ's Agro-Biodiversity Project, the Global Climate Change Alliance Programme, the Seeds of Life project, the SAPIP project and ACIAR-led projects.
- Data collected by different government agencies, in particular the Biodiversity Directorate under the Ministry of Development and Institutional Reform (MDIR) and the Research Directorate, the Forestry Directorate and the Fisheries Directorate under the Ministry of Agriculture and Fisheries (MAF).
- Data collected by UNTL and other universities/institutions in Timor-Leste.
- Open access sources such as ebird.org and Nature in Timor-Leste[53].

Targeted Outcome 2.2: Enhanced technological and business capacity for bio-prospecting in Timor-Leste, in compliance with the Nagoya Protocol on sustainable utilisation of genetic resources.

124. A key approach of the project is demonstrating and promoting the 'proof of concept' where private and public entities collaborate successfully on commercial and non-commercial research and bio-prospecting. To this end, activities under Outcome 2.2 will provide practical experience and promote ABS-based research in line with Articles 8 and 23 of the Nagoya Protocol, through co-funded laboratory and technology capacity building on screening for genetic and bio-chemical resources, and other properties. To provide the capacity, 'proof of concept', as well as essential technological/scientific knowledge to explore the genetic and bio-chemical resources of Timor-Leste's biodiversity, it has been agreed with the Japanese co-funding partner Nimura Genetic Solutions (NGS), that biochemical and genetic research laboratory capacity will be built at MAF's Seed and Soil Laboratory and the National Health Laboratory, based on similar successful facilities and programming support provided by NGS in Malaysia and Bhutan[54]. NGS will contribute through the formation of expertise, technology transfer, capacity building and a network of technology partners and key industry leaders critical to this outcome.

125. NGS has extensive experience in working on bio-prospecting in the region, in industries such as the cosmetic and health product industries, ornamental flowers, etc. In order to identify bio-resources with potential commercial properties, it is critical to (a) increase the knowledge on biological and genetic resources that exist in Timor-Leste (see Outcome 2.1), (b) document traditional knowledge on the uses of these resources, and (c) building laboratory and research capacity in order to be able to establish partnerships with the private sector. The project will, therefore, focus on these three priorities first and not pre-select any specific groups of organisms for screening, or any specific products to be developed. In addition, the bio-prospecting activities will be guided by corporate market demand for certain types of applications or products, as advised by NGS. Positive experience over the last 15 years by NGS in Malaysia, Bhutan and recently in Myanmar on partnership building for both the actual screening as well as identification of potential genetic resources and bio-chemical compounds, has already led to various

[53] Nature of Timor-Leste is a Facebook page sharing information and documenting wildlife records in Timor-Leste by citizens (C. Trainor *pers. comm.*) https://www.facebook.com/groups/722717567795805/?ref=br_rs

[54] See (a) http://www.ngs-lab.com/en/index.html (NGS website); and (b) http://nbc.gov.bt/?p=1725 (Bhutan National Biodiversity Centre).

partnership and MAT agreements with entities towards product development (see Section 1.2 on baseline projects).

126. Potential organisms of interest include, among others, medicinal and edible plants, ornamental flowers, marine sponges, algae, and microbes. Medicinal (or edible) plants in combination with studies of traditional knowledge in many countries have revealed many substances that have shown a steady demand from cosmetic and health product industries[55]. Seed companies are looking for new ornamental flower species to develop new flower varieties. In addition, Timor-Leste is expected to have a high diversity in marine sponges, which are usually used for finding novel chemical compounds applicable for pharmacological use (although the pharmaceutical industry has been rather slow in bio-prospecting research for this group of organisms). Algae (micro algae) have shown good prospects for discoveries related to their use for bio-fuel, health food and cosmetic products – and related species (yet) to be found in Timor-Leste are expected to have similar properties and uses.[56]

127. During the project design phase, a few options that potentially provide benefits to communities more quickly were discussed with Nimura Genetic Solutions (NGS), such as health food supplements and ornamental flowers. Nevertheless, it will be important to address unrealistic expectations on the magnitude and kind of benefits to be shared, and to ensure that the project stakeholders, in particular the communities, understand "that a (possible) future process of R&D and commercialization takes considerable time before any benefits may be actually generated and that profits do not arise quickly."[57] In addition, it should be emphasized that building laboratory and technological capacity is an important benefit in itself to the country and its institutions.

128. NGS has existing partnerships with international research agencies able and willing to invest in field surveys, bio-prospecting and product marketing, including, among others, Kitasato University and the Kyoto IPS laboratory. NGS will, thus, be able to bring them in when their expertise is required. Additionally, NGS has a proven track record of attracting corporate interest towards collaborative research and product development. As such there is good prospect already for strong and diverse partnership support to the GEF project and Timor-Leste specifically on bio-prospecting research, capacity building and related fields of work.

Field sites for surveys under Outcome 2.2

129. Based on the consultations held during the project preparation phase, the work under Output 2.2.2 (bio-prospecting and related inventory of traditional knowledge and collection of specimens) will initially focus on the following two locations.

    i) Mt. Legumau in Baucau municipality (where Conservation International is planning a biodiversity survey under a CEPF grant); and

    ii) Atauro Island for its high coastal and marine biodiversity[58].

130. Two *Sucos*[59] have been selected within these areas: 1) Lari Sula in Baucau Municipality (Mt. Legumau), and 2) Macadade on Atauro Island in Dili Municipality. These *Sucos* were selected based on the following criteria:

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[55] See Shalini, Bhalani 2002. Traditional knowledge of biodiversity in the Asia Pacific. GRAIN and Kalpavriksk: New Delhi: 38pp

[56] The GEF-UNDP Project Document 'Building shoreline resilience of Timor-Leste to protect local communities and their livelihoods' also mentions mangroves as having a great potential as a source of pharmaceutical products and genetic resources.

[57] ABS Management Tool (May 2012).

[58] A recent survey by Conservation International indicated very high marine biodiversity levels in Atauro, which led to the process suggested with government to propose the area for protection and integrated development to secure both the economic interests as well as the environment.

[59] As mentioned earlier, a *Suco* is the smallest political boundary in Timor-Leste. It is composed of several *Aldeias* (villages).

- They are located within a protected area and/or an area in which previous surveys identified a high level of biodiversity.
- The communities are already engaged in an environmental project which incorporates traditional knowledge.
- The communities are known to hold significant traditional knowledge related to their genetic resources.

131. In addition, both locations are relatively accessible, and they contain very different biotic assemblages from each other. At the same time, each site contains human populations that possess, because of differences in local language and traditions, different traditional approaches to the utilization of their ecosystems. Additional sites could potentially be selected during project implementation based on the needs identified by the bio-prospecting activities and in consultation with the different project partners.

Figure 2: Map of Timor-Leste, showing the ABS project field sites (source: Wikipedia)

132. ***Lari Sula in Mt. Legumau (Baucau Municipality)***

Mt. Legumau Protected Area is situated at the intersection of the Baucau, Lautem, and Viqueque Municipalities, within the upland portion of the Irabere catchment. Under the Critical Ecosystems Partnerships Fund (CEPF) grant, CI is planning to conduct ecological and cultural surveys in five *Sucos* of Mt. Legumau. Government and CI staff are currently undergoing training on conducting terrestrial biodiversity surveys. The surveys will involve the participation of local villagers, in particular with regard to their traditional knowledge of biodiversity. Mt. Legumau is also one of the two project areas under CI's GEF project, "*Securing the long-term conservation of Timor-Leste's biodiversity and ecosystem services through the establishment of a functioning National Protected Area Network and the improvement of natural resource management in priority catchment corridor*", which will allow longer-term follow up with the communities.

133. Within this project area, the *Suco* of Lari Sula in Baguia Administrative Post, Baucau Municipality has been selected as the terrestrial field site under the GEF ABS project. It includes a wide variety of ecosystems and is expected to host rich biodiversity. The biodiversity survey in this *Suco* will be conducted in November 2018. The development of Community Protocols (under Output 1.1.2) and PIC/MAT as well as the inventory of traditional knowledge and the collection of specimens (under Output 2.2.2) can, therefore, directly build on the activities conducted under CI's projects. Lari Sula has an area of 3,635 hectares and a total population of 821 (according to community consultations by CI in 2017). The people of Lari Sula are of the *Makasae* ethnic group. They speak the *Makasae*

language, and some inhabitants speak Tetum as their second language. Adult literacy in this *Suco* is 47%.

134. In addition, in April 2018, the Directorate of Climate Change has conducted village meetings as part of a vulnerability assessment in Lari Sula. This is part of a national effort to assess climate change vulnerabilities in different areas of Timor-Leste, in order to formulate recommendations for adaptation. Under this assessment, water security, environment and human health have been identified as particular vulnerabilities for this *Suco*.

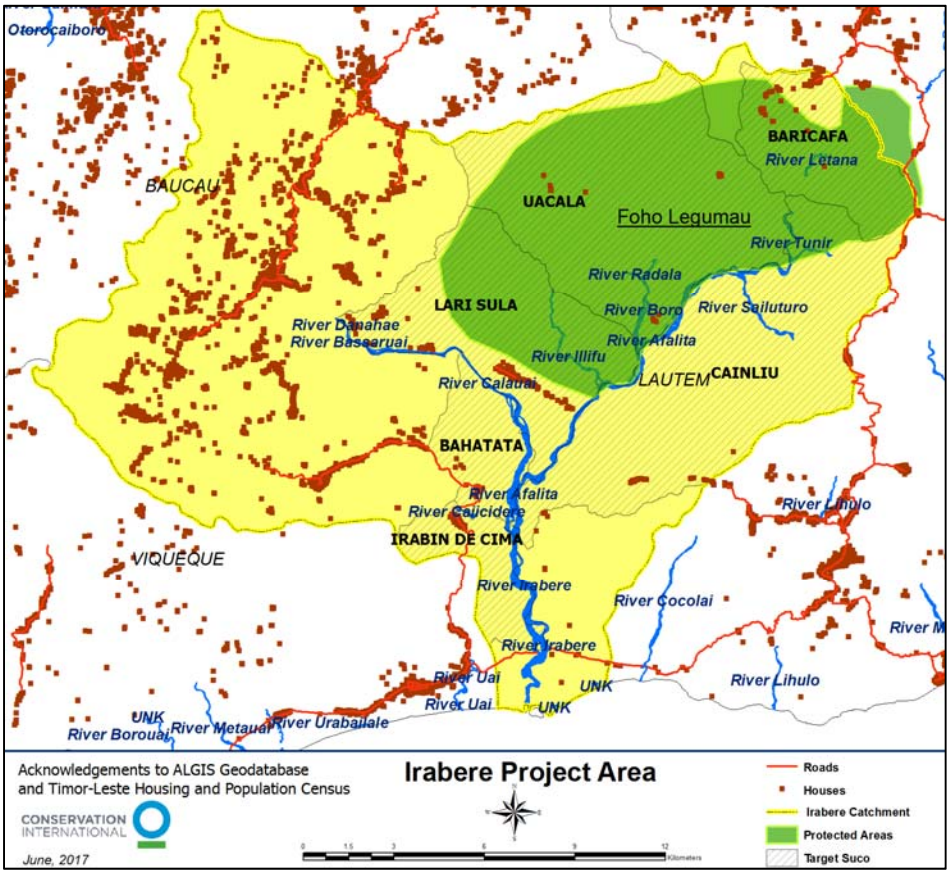


Figure 3: Map of CI's project area in the Irabere catchment, showing the Suco of Lari Sula in the centre (source: Conservation International, 2017)

135. ***Macadade on Atauro Island (Dili Municipality)***

The *Suco* of Macadade on Atauro Island (Atauro Administrative Post, Dili Municipality) has been selected as the coastal field site under the GEF ABS project – in particular, its coastal *Aldeia* of Berau. Macadade is located along the Wetar Strait, which separates Atauro and Timor. It has a total land area of 3,836 hectares. Parts of the coast consist of limestone cliffs. The area hosts rich coastal and marine biodiversity and is part of the Perairan Atauro Marine KBA, which surrounds Atauro island. There are 1,632 inhabitants in Macadade (2015 census). 97% of the inhabitants mention Raklungu as their mother tongue, a dialect of the Wetarese language.

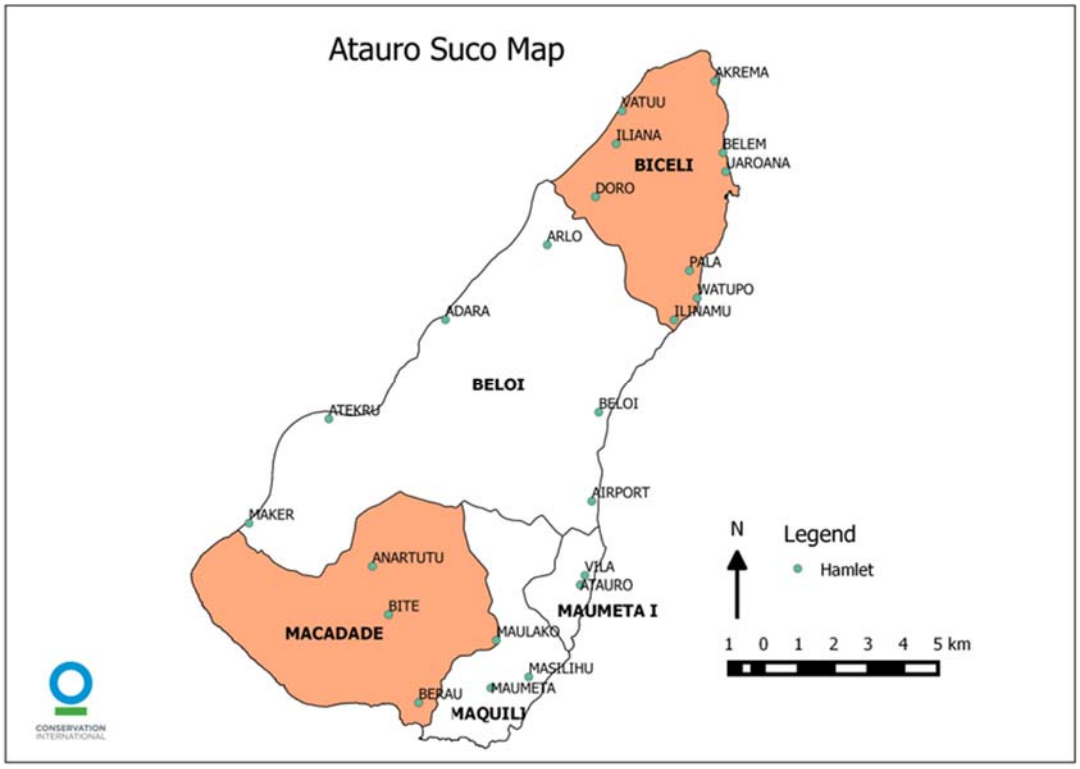


Figure 4: Map of Atauro Island, showing the Suco of Macadade and the Aldeia of Berau in the Southern part of the island (source: Conservation International, 2018)

136. CI has carried out numerous terrestrial, marine and cultural knowledge surveys in Macadade, in particular under the Asian Development Bank (ADB) funded project, "Food Security through Marine Protected Areas". Ecological and cultural surveys have been carried out in view of the Atauro Island National Park submission. The coastal *Aldeia* of Berau has a rich heritage of traditional knowledge on their biological resources. In addition, also under the ADB project, CI has worked with the Ministry of Agriculture and Fisheries through its National Directorate of Fisheries and Aquaculture to establish community-managed marine protected areas on Atauro Island.

Output 2.2.1: Memorandum of Agreement on Technical Collaboration signed between MDIR/MAF/UNTL and Nimura Genetic Solutions (NGS Japan) on multiple-year collaborative research and capacity building for bio-prospecting.

Lead: MDIR

Timeline: Year 1

137. Whilst already having an 'in principle' agreement with Nimura Genetic Solutions, Output 2.2.1 seeks formal endorsement by the Government of Timor-Leste through a Memorandum of Agreement on Technical Collaboration between the MDIR, MAF, UNTL and Nimura Genetic Solutions (NGS Japan) on a multiple-year collaborative research and capacity building program for bio-prospecting, including on providing capacity building for research staff at MAF's Seed and Soil Laboratory and the National Health Laboratory. As indicated above, good prospects exist to expand this partnership with additional agencies, including for possible subsequent marketing for product development.

138. The project will, thus, hold meetings to discuss and prepare a Memorandum of Agreement between MDIR/MAF/UNTL and NGS, and with the Ministry of Health/National Health Laboratory. This will also involve the provision of an endorsement letter or license agreement by the government that can serve as PIC while the formal ABS framework is yet to be established and formally adopted. The

agreement will establish clear terms and safeguards for the conduct of the bio-prospecting activities based on experiences from other countries. It is expected that the Memorandum of Agreement will be signed within the first year of project implementation.

139. In order to facilitate the understanding of the benefits of an agreement with NGS, the project will organise a visit to the Sarawak Biodiversity Centre in Malaysia for the key decision makers of Timor-Leste to learn first-hand from stakeholders in Malaysia how matters were agreed with NGS. This will also include a visit of a laboratory. NGS' positive track record of working with governments of various countries in this region will be highlighted, explaining that the partnership with NGS will help Timor-Leste to identify and develop genetic resources of interest for the country to be able to realise the opportunities of ABS, build in-country capacity of laboratory staff, support joint patent applications, etc. Examples from the GEF ABS project in India can also be cited, where 462 ABS agreements have already been signed with a total benefit sharing amount of INR 136,693,215 (approximately USD 2 million) spread over six states[60].

Output 2.2.2: Bio-prospecting trials implemented, enabled through PIC and MAT agreements with the provider(s) of the genetic resources, and through technology transfer in research and development.

Lead: MDIR (project management), NGS (technical aspects), CI (PIC/MAT and surveys) – in collaboration with MAF and UNTL

Timeline: Years 1-4

140. Once the Memorandum of Agreement is signed, the project will, under Output 2.2.2, facilitate the ***implementation of the bio-prospecting partnership*** *(capital and research costs are co-funded)*. In summary, the main steps under this Output will include:

i) Establishing PIC/MAT (lead: CI, in collaboration with MDIR, MAF and UNTL);
ii) Inventory and analysis of traditional knowledge (lead: CI, with guidance from NGS and in collaboration with researchers from UNTL);
iii) Collection of specimens in the field sites (lead: CI, with guidance from NGS based on market demand and in collaboration with researchers from UNTL);
iv) Technology transfer and capacity building at the laboratories, and conducting the actual screening and bioprospecting (lead: NGS, with MAF, MDIR and UNTL); and
v) Marketing support to national entities for further product development and commercialisation (lead: NGS with partners).

141. Therefore, as a first step, following the establishment of the model Community Protocols (Output 1.1.2) and the drafting of model agreements (Output 1.1.3) in the two pilot communities, CI (with MDIR, MAF and UNTL staff) will support NGS in establishing PIC/MAT in these two communities by conducting community consultations. This will also involve an agreement on traditional knowledge inventories. As explained under Output 1.1.3, the model PIC/MAT will be drafted with guidance from UN Environment and NGS based on experience from other countries (e.g., India and Malaysia) and based on existing materials such as the ABS Management Tool. An independent legal expert will be made available to the communities by the project team to provide independent advice and guidance to the communities. A provision has been made in the project budget to fund this expert.

142. Permits to undertake bio-prospecting or 'screening' activities as part of Output 2.2.2 will be provided by the competent authority, compliant with the national ABS procedures, upon completion of the PIC/MAT, which will benefit stakeholders (monetarily or non-monetarily), protect intellectual property rights, and provide data for the National Database. While the national ABS procedures are still under

[60] See also Prakash Nelliyat and Balakrishna Pisupati (2013). Valuation of Biodiversity, Dissemination Paper – 1, *Biodiversity Economics from Access and Benefit Sharing Perspective*. National Biodiversity Authority of India.

development, the endorsement letter or license agreement under the Memorandum of Agreement with NGS will serve as permit. The MATs will include agreements to report on potential for bio-prospecting in the agricultural, crop protection, food/beverage, botanical, cosmetics or pharmaceutical industries identified. It would also include identification of any non-monetary benefits that directly benefit the community, such as, among others, access to seeds and propagating material, *in situ* (medicinal) plant conservation, training on sustainable harvesting of biological resources and the participation in plant breeding or conservation activities. In addition, monetary benefits for local communities could be achieved through the development and commercialisation of locally produced goods. Also, as far as possible, local communities will be involved in local research activities, e.g., by hiring local guides or research assistants. This activity will help Timor-Leste to gain experience in the negotiation and documentation of the MAT, which will provide access to the research results and secure the subsequent flows of benefits to all parties[61].

143. Although a national inventory and detailed analysis of traditional knowledge towards any potential commercial application of Timor-Leste's biota will require significant resources and time[62] beyond the scope of this project, the project will support an inventory of knowledge on the traditional utilisation and properties of biological resources in the two pilot communities. This is to make a start with (i) setting the appropriate procedures and (ii) the national compilation of traditional knowledge in the geographic areas to be targeted. Once the PIC/MAT agreements are established, CI and researchers from UNTL will start to survey traditional knowledge in these two communities (using the protocols established under Output 2.1.2). In addition to the Faculty of Agriculture at UNTL, the project will seek to involve other faculties and institutions, in particular the Faculty of Social Sciences for research on traditional knowledge of genetic resources and the role of women.

144. Based on opportunities identified under Outcome 2.1 (collection of information on biodiversity and genetic resources of Timor-Leste), the traditional knowledge inventories and analysis and interest from the industry, CI and researchers from UNTL will then collect specimens of interest based on guidance from NGS. The organisms targeted for bio-prospecting/screening for useful compounds, properties or characteristics may include, among others, flowers, marine sponges, micro algae, and microbes.

145. A team of around six researchers from MAF, the National Health Laboratory and UNTL, through collaboration with NGS staff fielded for short assignments in Timor-Leste, will then start the laboratory screening process at the MAF and Health laboratories. To improve sustainability of the project activities, NGS will start with providing technology transfer on establishing, operating and maintaining laboratory facilities for conducting bio-prospecting activities. The laboratories will provide opportunity for on-the-job training provided by NGS to staff from MAF, the National Health Laboratory, UNTL and other institutions, such as the Dili Institute of Health Science, to undertake chemical compound screening for potential products for marketing possible commercial development. Capacity building activities will include short-term visits by international professionals, exchange arrangements for specialist training overseas (e.g., with Indonesia, Malaysia), and in-service training on-site at the laboratories with external specialists – specifically by Nimura Genetic Solutions team. Capacity building, which will be funded through a formula of private co-finance and project funding, will focus on the training of expert staff from MAF, UNTL and partner institutions. This capacity building will complement the training conducted under Outcome 1.2. The selection of technical staff for international exchanges will be done in consultation with the Project Steering Committee members and based on predefined criteria (including technical qualifications and adequate representation of women).

146. As part of the bio-prospecting trials and based on interest from industry, NGS through its partners will provide marketing support to national entities for further product development and commercialisation

[61] As noted elsewhere, Timor-Leste does not currently have legal protection for intellectual property. A draft Law is currently being discussed and will represent traditional custodians of genetic resources.
[62] As mentioned earlier, India has spent decades creating and maintaining a digital library on traditional knowledge.

(through collaborative agreements with international industry players, where relevant). This could also involve providing training for communities/cooperatives/small and medium enterprises on the potential commercialisation of genetic and bio-chemical compounds of interest to national and international industries.

147. The assessments under this output will be based on approved work plans that will include:

- Approved methodologies for specimen preservation and cataloguing, photography and tissue sampling where applicable for taxonomic or bio-prospecting purposes (ensuring sustainable harvesting practices and the safe disposal of chemical waste from laboratory activities);
- Agreed processes on traditional knowledge, including documentation, testing the depth and veracity of traditional knowledge, and assessment of proprietary rights, including customary rights;
- Protocols for sharing of knowledge and other matters related to potential benefit sharing mechanisms consistent with local customs; and
- Established PIC/MAT procedures to ensure that any benefits from the bio-prospecting trials and potential marketing and commercialisation will be fairly and equitably shared with the providers of genetic resources.

Output 2.2.3: Existing and new opportunities for bio-prospecting projects in e.g. the agricultural, crop protection, food/beverage, botanical, cosmetics or pharmaceutical industries identified.

Lead: MDIR (with consultants)

Timeline: Years 2-4

148. Output 2.2.3 will aim to identify opportunities for bio-prospecting in view of facilitating future access to marketing and commercialisation of biological resources. A national and/or international expert will record and assess existing opportunities (through secondary research and consultations), as well as new opportunities (emerging from Output 2.2.2). These can include opportunities, for instance, in the agricultural, crop protection, food/beverage, botanical, cosmetics or pharmaceutical industries.

149. The project will then organise a workshop to discuss main opportunities and elaborate long-term plan to pursue these (including funding). The workshop will include NGS and its network partners and other interested national and international institutions (e.g., from Australia), as well as Timorese small and medium enterprises (SMEs) and local community organisations. In addition to commercial interests, the project should encourage research on bio-resources of interest for national food security and livelihoods (e.g., research on local timber species and non-timber forest products)[63].

150. The project will, under the lead of MDIR, produce and disseminate a report on bio-prospecting opportunities, partnership and marketing in Timor-Leste.

3.4 Intervention logic and key assumptions

Intervention logic

151. The intervention logic is summarised in the Theory of Change shown in Figure 5 below. Four main targeted outcomes will be supported by this project, namely:

1) A national legal and institutional framework on ABS and the protection of traditional knowledge;

[63] As noted by Cowie (2006), "there is potential for the limited, small-scale sustainable harvesting of some forest products both for local use and for commercial purposes and this would give local communities more stake in having areas of natural vegetation set aside and a potential source of income." Cowie, Ian 2006. A survey of the flora and vegetation of the proposed Jaco-Tutuala-Lore National Park (undertaken for Birdlife International and the MCIE by the NT Herbarium, NT Department of Natural Resources, Environment and the Arts).

2) Increased awareness and capacity of national stakeholders on ABS principles, economic potential and procedures under the Nagoya Protocol and the national framework;

3) Enhanced institutional capacity for facilitating research and implementing monitoring of ABS and traditional knowledge through facilitated access to data; and

4) Enhanced technological and business capacity for bio-prospecting (i.e., the process of screening for and discovery and commercialisation of new products based on biological resources) in Timor-Leste.

152. As shown in Figure 5, each of these targeted outcomes will be supported by several outputs. The first outcome is anticipated to be achieved if a regulatory and institutional framework is developed, if model Community Protocols and ABS model agreements (PIC, MAT) are available, and if the accession to the Nagoya Protocol and adoption of the national ABS framework is supported through high-level dialogue with policy-makers and parliament and through the compilation of the required information for the formal accession to the Nagoya Protocol. The second outcome will be realised if an outreach and institutional development plan on ABS is developed and a national outreach campaign and targeted training programme implemented. The third outcome is expected to be achieved if a consolidated National Database on biodiversity, genetic resources and traditional knowledge, and national ABS Clearing House Mechanism, are established, if protocols are established on collecting, cataloguing, permitting and monitoring of fair access to scientific records and traditional knowledge in Timor-Leste, and if existing information from previous research and collections is incorporated into the database. The fourth and last outcome will materialise if a Memorandum of Agreement is signed with NGS on a multiple-year collaborative research and capacity building, if this technical cooperation and bio-prospecting partnership is implemented through conducting biochemical and genetic screening trials, and if bio-prospecting opportunities are identified and the commercialisation of products supported.

153. If these four outcomes are achieved, the conditions will be in place to enable sustainable access to genetic resources in Timor-Leste, delivering fair and equitable sharing of benefits to its people while protecting legal and customary ownership and traditional knowledge. It is expected that this will, in the long-term, lead to enhanced conservation and sustainable use of biodiversity in Timor-Leste through the effective implementation of the Nagoya Protocol and, therefore, generate global environmental benefits.

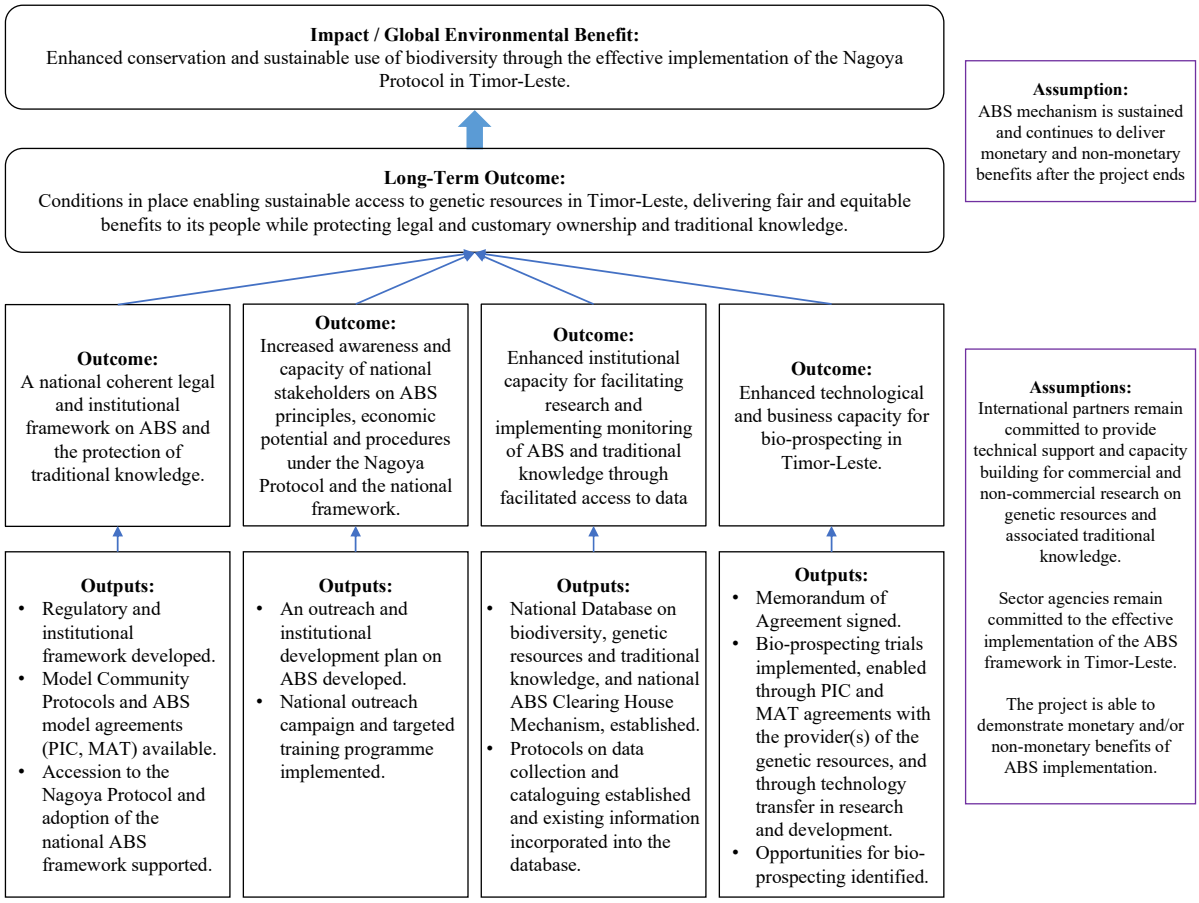


Figure 5: Theory of Change

Key assumptions

154. One of the key assumptions for this Theory of Change is that short-term or long-term monetary and/or non-monetary benefits can be demonstrated during the project implementation. Another key assumption is that international partners remain committed to provide technical support and capacity building for commercial and non-commercial research on genetic resources and associated traditional knowledge, and that sector agencies remain committed to the effective implementation of ABS in Timor-Leste. Based on consultations during the project design phase, it is expected that these assumptions will be met.

155. For the long-term benefit of enhanced conservation and sustainable use of biodiversity in Timor-Leste, the key assumption is that the ABS mechanism is sustained and continues to deliver monetary and non-monetary benefits after the project ends. The project will lay the foundations for this to be met; however, other external conditions outside of the control of the project will be required in order for this long-term benefit to materialise.

3.5 Risk analysis and risk management measures

156. The project risks and risk mitigation measures are described in the table below.

Identified Risks and Category	Impact	Likelihood	Risk Assessment	Mitigation Measures
Weak operation and maintenance of laboratory facilities will impact the sustainability of the bio-prospecting work and partnership.	MEDIUM	HIGH	HIGH	During the project design phase, emphasis has been placed on identifying and assessing capacity/challenges/potential of existing laboratories to build upon. As a result, the project will work with mandated national agencies (UNTL/MAF) and work through two main laboratory partners (MAF's Seed and Soil Laboratory and the National Health Laboratory), who already conduct examinations and maintain their specific equipment used. Emphasis will also be placed on technology transfer as well as capacity building in operation and maintenance of the laboratory.
Possible shifts in government priorities and policy changes could hinder the establishment of an ABS regime and/or constrain the development of public-private partnerships on biodiversity and genetic resources.	HIGH	LOW	MEDIUM	The project will strengthen political commitment and support by raising the awareness of decision makers, institutions, and communities on the capacity of biodiversity and genetic resources to provide economic benefits to resource owners / stewards and to commercial partners, and to contribute to science and national research capacities generally. The project also will strengthen the capacity and understanding of decision makers, institutions, and communities on the potential benefits of an ABS regime through targeted training modules and access to best practice tools and ABS success stories. The benefits and costs of ABS implementation, based on case studies from other countries, will be highlighted during the project inception phase in order to increase support by decision makers.
Uncontrolled exploitation of forests and other natural ecosystems at field survey sites continues to negatively impact marine and terrestrial ecosystems and their genetic resources.	MEDIUM	MEDIUM	MEDIUM	By establishing ABS regulations and by building in-country capacity for bio-prospecting, the project aims to generate monetary and non-monetary benefits to Timor-Leste and its communities. These benefits (e.g., increased knowledge of the value of genetic resources, income from locally developed products) are expected to provide incentives for the protection of natural ecosystems (e.g., reefs and forests). The project is thereby expected to reduce the pressure of encroachment and conversion to other destructive purposes. If a genetic resource of interest is found and grown for commercial purposes, the project will make

Identified Risks and Category	Impact	Likelihood	Risk Assessment	Mitigation Measures
				sure that its harvest is sustainable and does not negatively affect ecosystems, based on the know-how and experience of MAF and other project partners.
Limited coordination / communication between sectorial agencies and/or ministries	MEDIUM	MEDIUM	MEDIUM	The project will support the development of inter-agency collaboration protocols by building on existing structures and initiatives such as the Timor-Leste National Council for Food Security and Nutrition (KONSANTIL), the Agriculture and Fisheries Development Partners' working group and the Agrobiodiversity working group. Under Output 1.2.2, the project will also consider the establishment of a Biodiversity Working Group to discuss and follow up on activities related to biodiversity, including genetic resources. It will also seek to get all sectorial agencies with responsibilities related to biodiversity and genetic resources to be designated as Competent Sector Authorities (CSAs) and to incorporate ABS into their routine responsibilities.
Local communities and holders of traditional knowledge do not agree to share information and grant access to their genetic resources.	MEDIUM	MEDIUM	MEDIUM	A fair and clear process needs to be designed and followed as part of the Community Protocols and the PIC/MAT agreements to gain the trust and long-term partnership of the communities. This will be facilitated by project partners that have experience in community engagement and co-management arrangements, in particular Conservation International and MAF. Additionally, an independent legal expert will be made available to the communities by the project team to provide independent advice and guidance to the communities.
Climate change impacts	MEDIUM	MEDIUM	MEDIUM	Climate change is expected to have adverse impacts on ecosystems and communities of Timor-Leste, in particular through increased droughts, more intense rainfall events leading to erosion and landslides, and rising sea temperatures. These changes may negatively affect project stakeholders and limit their capacity to participate in project activities. Climate change, combined with other factors, is also expected to have negative impacts on biodiversity and genetic resources in Timor-Leste, which could affect the value and diversity of genetic resources in the future. On the other hand, some species found in Timor-Leste may prove to be valuable resources due to their climate

Identified Risks and Category	Impact	Likelihood	Risk Assessment	Mitigation Measures
				resilience[64]. In order to mitigate this risk, the project will collaborate closely with the National Directorate for Climate Change and climate change related initiatives implemented in Timor-Leste, in particular with regard to its commitments under the UNFCCC.

3.6 Consistency with national priorities or plans

157. The NBSAP 2011-2020 provides a clear road map for the implementation of Timor-Leste's commitments to the Convention on Biological Diversity, to which it has been a party since 2007. The Vision is that by 2020 Timor-Leste's biodiversity and ecosystems are conserved and wisely used by all sectors, providing food security and contributing to poverty eradication and improved quality of life of Timorese People. Strategic Action 16 is directly relevant to the Nagoya Protocol and to the proposed project. Other strategic actions are also related to the project, as shown in the table below (thematic linkages are highlighted in bold).

NBSAP Priority Strategy and Targets	**Strategic Actions relevant to the Nagoya Protocol**
Priority Strategy 2: Protecting Biodiversity and Promoting Sustainable Use Target: By 2015, rehabilitation activities in critical watersheds and degraded lands have been undertaken and at least one million trees have been planted per year, providing sustainable livelihoods to local communities through ecosystem restoration activities.	Strategic Action 6: Enhance and develop a **national biodiversity law** and relevant environmental policies on nature conservation, pollution and other related concerns, including traditional laws.
Priority Strategy 3: Building climate-resilient ecosystems through effectively managing protected areas and reducing threats to biodiversity Target: By 2020, the status of biodiversity has improved through the safeguarding of ecosystems, species and genetic diversity in the 30 declared protected areas.	Strategic Action 12: Develop and implement a comprehensive and integrated agricultural management programme aimed at **maintaining plant genetic diversity**.
Priority Strategy 4: Enhancing biodiversity and ecosystems services to ensure benefits to all Target: By 2020, ecosystem services have been enhanced through promoting economic values of	Strategic Action 16: Develop and promote understanding of **national policies on access and benefit-sharing** arising from utilization of genetic resources, including biosafety measures. Sub-action 16.1: Conduct awareness-raising among policymakers, government and non-government

[64] At the ecosystem level, Timor-Leste's coral reefs seem to be relatively resilient to climate change. Erdmann and Mohan (2013) noted that "there was no evidence or reports of past (1998) or recent (2010) large-scale high temperature bleaching-induced coral mortality around Timor-Leste. This is consistent with the presence of cool waters in most sites, which were […] three to four degrees cooler than many neighbouring locations. […] Timor-Leste's oceanography may provide a cool water buffer and refuge against the increasing sea temperatures predicted from climate change over coming decades." (see Footnote 12)

biodiversity and ecosystems and promoting benefits sharing.	stakeholders, including private sectors and communities to understand the Nagoya Protocol. Sub-action 16.2: Conduct national and local consultations in developing national policies on ABS.
Priority Strategy 5: Enhancing implementation of the NBSAP through participatory planning, knowledge management and capacity building, including district and sub-district and community levels Target: By 2015, a national biodiversity monitoring and reporting system on biodiversity has been established, using the Clearinghouse Mechanism as a platform for information, knowledge management and networking.	Strategic Action 18: Develop an **integrated research programme for Timor-Leste** and intensify research efforts on the different aspects of forestry, protected areas, agriculture and other ecosystems, such as population studies, ecological studies, water quality assessment, and impact of alien invasive species. Strategic Action 20: Document and promote **indigenous and traditional knowledge, techniques and practices** for biodiversity conservation and environmental protection.

158. The proposed project is consistent with the Biodiversity Decree Law (2017), the General Forestry Regime (2017), the National Seed Policy and the Decree Law on the National System of Protected Areas (2016), as well as the full body of environment-related laws and policies comprehensively reviewed in the 2014 appraisal of the UNEP-GEF Regional ABS Project (see Footnote 27). In particular, the Biodiversity Decree Law, prepared in conjunction with the National Biodiversity Strategy and Action Plan (NBSAP), provides for the implementation of the Nagoya Protocol through regulations to be made under the law. Although the Decree Law is yet to be promulgated by the President (expected in early 2019), its affirmation by Parliament in 2017 has laid the foundation for proceeding with the ABS process. A review of Timor-Leste's approach to implementing the Nagoya Protocol conducted in 2014 recommended that the implementation of the Nagoya Protocol be undertaken through development of regulations under the Biodiversity Decree Law[65].

159. Timor-Leste has made several commitments to the implementation of the CBD and the achievements of its targets. For example, in the revised NBSAP (2015), the government has proposed a Capacity Development Plan to enhance technical and managerial capacities for the conservation and management of the country's biodiversity, as well as a Communication, Education and Public Awareness Strategy (CEPA). This is based on the recognition that a well-informed public is the foundation for effective engagement and implementation of programmes and compliance to policies by the society. The Capacity Development Plan and the CEPA have informed the design of activities under Component 1 of the project.

160. Under the CBD, Timor-Leste has also committed to establish a Timor-Leste Clearing House Mechanism (CHM) on biodiversity. In the NBSAP, the design of the CHM has been presented along with several steps that have been taken to implement the facility; however, achieving operational status is still in process. The CHM offers a key area of partnership with this ABS project, which proposes to facilitate its implementation by incorporating these functions into the National Database discussed under Component 2. The close working relationship that already exists between the MDIR and the CCCB at UNTL will efficiently focus funding and support from the national government and the donor community and other international and regional organizations on a single database management system, linked to training and education in the university, expanding access and use and further ensuring sustainability.

[65] Burton, Geoff 2014. *Assessment of Timor Leste's Approach to Implementing the Convention on Biological Diversity's Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization.* UNU: Institute for Advanced Sustainability Studies: 23 pp. Annex to the Completion Report of the UNEP-GEF Regional Project on ABS.

161. The project also incorporates recommendations made at the "Finding Pathways to Achieve the Sustainable Development Goals" Conference organised jointly by UNTL and Victoria University in Dili in July 2017. In particular, it addresses the following recommendations:

i) SDG 1 (No Poverty): Encourage greater cooperation between ministries at all levels, including collaborative research with UNTL on issues holding back the eradication of poverty.

ii) SDG 2 (Zero Hunger):

- Academics, especially UNTL and Victoria University need to do research to identify local varieties and species of seeds and establish seed banks for genetic resources and seed saving programs in every community based on their local seeds calendar.
- Need to establish laboratory to test and analyse nutrition value of local food production in Timor-Leste.

iii) SDG 3 (Good Health and Wellbeing): Value traditional methods and carry out research on traditional medicines to determine their efficacy.

iv) SDG 4 (Quality Education):

- It is recommended that the government increase financial resources to support tertiary education, both public and private, and invest in appropriate infrastructure i.e. libraries and IT infrastructure for higher education (National Research and Education Network) to improve quality and increase numbers of graduates and timely graduations.
- 'Institutional partnerships' are recommended to the universities with institutions in other countries, to facilitate access to resources such that every university has a library, shares research experience etc.

v) SDG 15 (Life on Land): Change attitudes and protect biodiversity; Concentrate and promote local knowledge […].

3.7 Incremental cost reasoning

162. Without the GEF project, Timor-Leste would not be in a position to build the necessary capacity for ABS implementation and create the enabling conditions for the accession to the Nagoya Protocol. The GEF incremental support will allow for the development of the necessary regulatory and institutional framework, the relevant protocols and model agreements, awareness and capacity building, the data inventories for genetic resources and traditional knowledge, as well as the 'proof-of-concept' bio-prospecting demonstration activities.

163. The proposed project is focused on supporting the implementation of existing policies and plans (in particular, the Biodiversity Decree Law, the NBSAP, the General Forestry Regime, and the National Seed Policy). Co-financing support from the government, development partners, the private sector and civil society will complement GEF-funded activities in achieving common objectives. The GEF will contribute USD 1,319,863 of the overall budget, and various co-financing partners will contribute an additional USD 4,050,000.

164. The incremental cost reasoning for the different components of the project is summarised in the table below.

Project Component	Scenario without GEF project	Scenario with GEF project
Component 1: Establishment of national legal and institutional	Timor-Leste has an administrative structure for implementation of the CBD, and a Competent National Authority (CNA) and National Focal	By the end of the project, government and civil society stakeholders will have increased understanding of the CBD and the implications of the Nagoya Protocol.

framework on ABS, including Traditional Knowledge	Point for the Nagoya Protocol. The country also has relevant legislation, including the Biodiversity Decree Law and the General Forestry Regime that deal specifically with ABS issues. In the absence of the proposed project, however, national ABS policies and regulations will remain undeveloped and the different agencies will not have the necessary capacity to support ABS implementation.	Competent Sector Authorities (CSAs) will have been designated and have incorporated ABS into their routine responsibilities through policy, planning and regulatory amendments, providing a model for replication at local levels of government. A government brief will have been produced to support the adoption of the national ABS framework (i.e., regulations and procedures) and the formal accession to the Nagoya Protocol. GEF incremental support will be used to develop the national regulatory and institutional framework, the government brief, and the National Operational Guidelines, and to implement the awareness and capacity building activities. Co-financing from MDIR, MAF and UNTL-CCCB will provide infrastructure and human resources to support implementation. Co-financing from UN Environment and CI will support the integration of lessons learned and experiences from other countries in the region and globally, and will also help to create synergies with ongoing work on capacity building, biodiversity surveys and community engagement in Timor-Leste.
Component 2, Outcome 2.1: Institutional capacity enhanced for enacting Article 17 on 'monitoring' and Articles 8a & 23 on 'promoting research' for sustainable use through consolidation of inventory, cataloguing and fair access to national and internationally held records on biodiversity, genetic resources and traditional knowledge of Timor-Leste.	Information on biodiversity and genetic resources in Timor-Leste is widely dispersed and not readily accessible to most stakeholders. In the absence of project activities to enhance and share such knowledge, the country will remain disadvantaged in identifying potential products based on biodiversity / genetic resources and in negotiating terms with organisations proposing scientific studies or bio-prospecting within its borders.	By the end of the project, a national biodiversity database and management system for storage of scientific and traditional knowledge, as well as a national ABS Clearing House Mechanism (possibly in parallel with a national CBD Clearing House Mechanism), will be operational, providing decision-makers with the information necessary to establish priorities and implement actions related to access and benefit sharing of genetic resources. Furthermore, the collection, storage and protection of scientific and traditional knowledge related to biodiversity will be carried out according to agreed-upon protocols and processes, and the country will have at least 1,000 species/varieties of local plants and animals integrated into the national database. GEF incremental support will be used to develop the databases and to lead the data collection effort. Co-financing from MDIR, MAF and UNTL-CCCB will provide infrastructure and human resources to support implementation and sustainability of the project interventions. Co-financing from UN Environment, CI, and the European Union will provide technical support for the

		development of protocols, support in collecting existing data, as well as developing research capacity and knowledge on native genetic resources.
Component 2, Outcome 2.2: Enhanced technological and business capacity for screening and commercialisation of genetic and bio-chemical compounds of biodiversity in Timor-Leste, in compliance with the Nagoya Protocol on sustainable utilisation of genetic resources.	In the absence of the proposed project, Timor-Leste will continue to have very little practical experience or control over bio-prospecting and in developing protocols, agreements and products based on the fair use of its biodiversity and genetic resources. The country will remain severely constrained in its efforts to develop products based on biodiversity / genetic resources that can benefit local communities and the country as a whole, and it will have no practical models or experience to guide its efforts to develop an ABS regime and accede to the Nagoya Protocol.	By the end of the project, government, the private sector, and civil society will have greatly increased capacity to assess scientific and associated traditional knowledge of biodiversity and its potential uses and to carry out bio-prospecting, laboratory management, and product trials. National policies, regulations and operating procedures / manuals on ABS will have been revised / strengthened as necessary based on the practical experiences and lessons learned at the field survey sites. As a result, public-private partnerships will be in place and actively pursuing commercial and non-commercial research and the development of products based on biodiversity / genetic resources at demonstration field sites, in compliance with clearly articulated ABS protocols. GEF incremental support will be used to cover meeting/training and travel costs, some equipment that cannot be covered through co-financing, as well as technical services by CI and UNTL. Co-financing from MDIR, MAF and UNTL-CCCB will provide infrastructure and human resources to support implementation and sustainability of the project interventions. Co-financing from NGS will be the main source of technical support and technology transfer.

3.8 Sustainability

165. Firstly, the project is sustainable because it supports the implementation of already approved national legislation (the Biodiversity Decree Law), and because it focuses on establishing a national policy and regulatory framework for ABS in Timor-Leste, supported by the two key government agencies for ABS, MDIR and MAF. It is also sustainable because it builds on existing procedures and mandates within these ministries. By establishing a high-level dialogue with policy makers and Parliament, emphasising the economic potential of genetic resources and traditional knowledge, the project will aim to secure government commitment for the allocation of resources necessary for the implementation of the ABS framework after the project ends. The project will also ensure that clear responsibilities are assigned, and sufficient budget is allocated – as part of the evolving national ABS framework, for the maintenance and update of the National Database and the national ABS Clearing House Mechanism in the medium and long term.

166. The project is also sustainable because of its focus on institutional strengthening and capacity building. By building on existing institutional structures and capacity available, in particular in MAF, and by strengthening recently established government institutions such as the National Directorate for Biodiversity Protection and Restoration and the Centre for Climate Change and Biodiversity (CCCB),

the project will aim to build long-term professional capacity for ABS implementation in Timor-Leste. The project will also aim to increase awareness and public support for ABS implementation and encourage engagement with rural communities, which are presently poorly represented in decision making and whose traditional knowledge is also mostly discounted by economic planners.

167. By facilitating the emergence of a national database and biochemical and genetic research laboratory facilities with national and private sector funding outside the project, it is intended that a feedback loop of expanding expertise and commitment will be built, based on success stories and lessons learned that will also facilitate sustainability.

168. In addition to this, several strategies have been incorporated into the project design to ensure the long-term sustainability of the project activities beyond the life of the project. These include, among others: (i) the development of a clear and simple institutional framework and regulations with the involvement of the responsible agencies; (ii) the assignment of clear responsibilities and government budget to sustain the maintenance and update of the national database and the operation and maintenance of the laboratories in the long term; (iii) the development of measures to ensure that capacity building activities are sustained after the project ends (e.g., by designating champions in each sector agency, allocating budget and adjusting terms of reference of relevant agencies); (iv) the establishment of long-term research partnerships; and (v) the elaboration of a long-term plan to pursue priority bio-prospecting opportunities (including funding).

3.9 Innovation and Replication

169. The key innovation of this project is the use of a public-private partnership as 'proof of concept' on bio-prospecting (i.e., the process of screening for and discovery and commercialisation of new products based on biological resources) – which is a novel field for national agencies and corporate partners in Timor-Leste – to demonstrate the value of ABS implementation in Timor-Leste. This innovation is extended through the establishment of partnerships with national and international research institutions, civil society organisations and local communities in order to increase the knowledge base and build in-country capacity for research on genetic resources and associated traditional knowledge.

170. The project has strong potential for replication and up-scaling because it will establish an ongoing process through institutional and professional education and training, including enhancement of national and international networks of relevant organisations. The field survey activities to be supported by the project will provide models that can be replicated at many other sites within the country. In addition, these demonstration activities will establish a model framework for bio-prospecting and assessments of biodiversity / genetic resources and associated traditional knowledge, which can be up-scaled into broader national policies and regulations.

171. The project also applies an innovative approach by using the corporate demand and market prospects to direct inventories and bioprospecting work under the guidance of NGS, which is well connected with corporate partners, rather that screening a broad range of organisms and look for possible market interest for these. In addition, under the bio-prospecting activities, the project will use advanced technologies such as biotechnology for innovation and replication.

3.10 Public awareness, communications and mainstreaming strategy

172. As part of Outcome 1.2, an outreach and institutional development plan will be developed, defining actions to build awareness and capacity on ABS issues, tailored to the needs of different stakeholders (government agencies, research institutions/academia, indigenous and local communities, private sector, media; women and youth). Baseline and end-of-project surveys will be conducted to be able to identify the target audiences and key communication messages, and to analyse impact from the outreach and communications work. Subsequently, a national outreach campaign will be implemented, involving relevant stakeholders such as government staff, researchers, local communities, and relevant industry

players. The outreach campaign will be led by an Outreach and Capacity Building Expert (consultant) under the guidance and with support of MDIR.

173. The proposed project places knowledge management at the centre of its strategy, and its outcome to address the storage and management of digital data on biological specimens will contribute substantially to the knowledge base for Timor-Leste. By collaborating with UNTL and its Centre for Climate Change and Biodiversity (CCCB), project outputs and products are ideally situated to be converted into teaching and learning tools. Information generated by the project will be made available on the national ABS Clearing House Mechanism. The project will also collaborate closely with the GEF-UNDP Cross-Cutting Capacity Development (CCCD) project, in particular with regard to its activities on information management systems and awareness raising.

174. Participatory and multi-stakeholder meetings will ensure access to information is maximised across the many stakeholder groups, including government, CSOs, and the private sector. The Outreach and Capacity Building Expert will provide support in facilitating community engagement (e.g., for the development of Community Protocols, PIC and MAT, and the inventories of traditional knowledge), ensuring that any communication and engagement is gender sensitive and meets local people's interests.

175. Internationally, the project will establish a network of partnerships with international institutions based on a two-way flow of scientific information, which will increase knowledge and assist in capacity building while also assisting in the establishment of a regulatory framework for potential commercial interactions involving biodiversity and genetic resources. Finally, collaboration with similar projects in the region is actively being sought with the support of the UN Environment Regional Office in Bangkok.

176. By involving Competent Sector Authorities (CSAs) in the implementation of ABS in Timor-Leste and by linking the process to existing permitting systems, ABS is mainstreamed into the regular mandates of these agencies. In addition, by closely involving and building the capacity of UNTL as one of the project partners, ABS is also mainstreamed into the academic and research sector. The national outreach programme will help to build the case, trust and partnership towards developing, endorsing and implementing the national ABS framework.

3.11 Environmental and social safeguards

177. The environmental and social safeguards for the project are informed by the GEF *Policies on Environmental and Social Safeguards and Gender Mainstreaming* and the UN Environment Environmental Social and Economic Review Note (ESERN, please refer to Appendix 14). The main objective of the safeguards is to prevent and mitigate any unintended negative impacts to people and the environment that might arise through the implementation of project activities. The UN Environment-ESERN checklist will be reviewed annually during the annual PIR review, and at the Mid-Term and Terminal Evaluation stages.

178. No significant risks with regard to the environmental and social safeguards have been identified for this project. On the contrary, the project is designed to provide benefits for local communities and biodiversity. In terms of social safeguards, the field component of this project is primarily linked to interviewing, surveying and sampling activities[66], although a more in-depth engagement with communities will take place to ensure Prior Informed Consent (PIC) and respect community ownership over genetic resources and associated traditional knowledge in accordance with the provisions of the Nagoya Protocol. Any utilisation of genetic resources will be based on Mutually Agreed Terms (MAT) to ensure fair and equitable sharing of benefits. The project will also involve the development of Community Protocols to ensure that local indigenous practices, beliefs and customary law are followed to guide access to traditional knowledge associated with genetic resources. Moreover, the project will

[66] Output 2.2.2.

ensure that any Community Protocols and model agreements take into account the specific needs and priorities of local communities, in particular women, and that any benefits are available to both women and men.

179. A sub-contract with CI will be established to lead the implementation of the community consultations and ensure that the field activities do not negatively affect local communities and their livelihoods. CI already has a presence in the two pilot field survey sites (Baucau and Atauro, see section 'Field sites for surveys under Outcome 2.2'), and has extensive experience in community engagement in Timor-Leste. In particular, CI supported the development of "Guidelines for Establishing Co-Management of Natural Resources in Timor-Leste", which can serve as a reference for the development of model Community Protocols under this project. Information will be provided in the local languages relevant to the field survey sites (CI's field coordinators in Timor-Leste are native to the area they work in). The project will involve all project stakeholders, including local community representatives, early in the process in order to ensure that their views and concerns are taken into account in the design of the national ABS framework.

180. A socio-economic analysis has been produced to identify any socio-economic constraints for the implementation of ABS in Timor-Leste and to formulate recommendations to overcome these constraints. The socio-economic analysis is included as Appendix 15. As mentioned in the analysis, Timor-Leste consists of several ethnic/language groups, the majority being of Malayo-Polynesian descent and Melanesian/Papuan descent. The development of model Community Protocols will ensure the respect of socio-cultural conditions as well as the inclusion of the different ethnic groups.

181. In terms of potential impacts on the environment, the project will ensure that any sampling/surveying activities involve sustainable harvesting practices and pay particular attention to threatened species, under the guidance of MDIR, MAF, NGS, UNTL and CI. Although sampling for bio-prospecting activities generally involves only small volumes of biological resources, it is nevertheless of critical importance to ensure their sustainable collection at all stages of implementation, in line with national legislation. This is also highlighted by Best Practice Standard 5.0 of the ABS Management Tool (see excerpt below). Additionally, if a genetic resource of interest is found and grown for commercial purposes, the project will make sure that its harvest is sustainable and does not negatively affect ecosystems, based on the know-how and experience of MAF and other project partners. The project will also establish the necessary procedures for the safe disposal of chemical waste from laboratory activities, and train laboratory staff accordingly.

Standard 5.0: Conservation and Sustainable Use
(if access involves wild collection or in situ wild sources of genetic resources)

Conservation and sustainable use are practices that ensure, or contribute to, the maintenance of biological diversity and its components for accessed genetic and other biological resources.

5.1 The collection and/or harvest of wild genetic resources is conducted, using a precautionary approach, at a scale and rate and in a manner that does not exceed the sustainable yield and that does not impair ecosystem structure, functions, and services.

5.2 Domestication and cultivation/captive breeding of genetic resources is conducted in a manner that does not jeopardize the genetic variation of the population or diversity of the gene pool.

5.3 Species listed in Appendix 1 of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and species considered to be globally or locally threatened according to the IUCN Red List or equivalent categories are not collected, except for the purpose of species conservation research. No collection is undertaken in legally established protected areas that prohibit collection.

5.4 Knowledge about biodiversity that arises from access to a genetic resource is shared in a manner that supports and enhances conservation management.

Gender equality and women's empowerment

182. For successful ABS implementation in Timor-Leste, it is important that the project take into account the specific situation, needs and priorities of women in the country. According to the United Nations Development Assistance Framework (UNDAF) 2015-2019 for Timor-Leste (see Footnote 42),

> Timor-Leste has made strong commitments to respect, protect and fulfil human rights as guaranteed in the Constitution and through ratification of various international human rights instruments. Numerous efforts have been made to address gender inequalities. However, gender disparities continue to exist in health, education, employment and other sectors, and the subordinate social status attached to women as well as economic hardship have placed women in a weak position in society, reflected in Timor-Leste's high Gender Inequality Index (GII) ranking in 2011 (0.547, or 111th out of 187). Despite the country's enviable record of women's political participation at the national level, with 38 percent of women in national parliament, the situation is very different at the local level, with almost all *suco* (village) and *aldeia* (community) chiefs being men and only 2 percent women's representation in the *suco* councils.

183. The gender assessment conducted under the GEF-UNDP 'Building shoreline resilience of Timor-Leste to protect local communities and their livelihoods' project further notes:

> Although the constitution grants equal rights in terms of ownership to both men and women, this constitutional right is rarely exercised by women. Traditional patriarchal asset control prevails, with all assets (land, house, etc.) belonging to a husband, and being inherited by male descendants only. […]
>
> In the domestic or reproductive sphere, there is generally little change from traditional gender roles where women care for children, cook and clean and pay attention to household food security. Women also share agricultural work with men. Addressing the burden of work shouldered by women within the household is essential in order to enable them to participate in other community – and cash generating – activities.[67]

184. Brendan and Aguilar (2007) highlight the need for women to be involved in negotiation and project design processes of ABS initiatives, in order to ensure that the design and identification of expected benefits responds to their interests and priorities. Special measures should be established to facilitate women's access to information, participation in PIC procedures or negotiation of MAT. Brendan and Aguilar also note:

> Women may also require capacity building to prepare them to participate in negotiation activities, and at a minimum be able to follow the course of negotiations and to make known their desired set of benefits and obligations for any agreement. […]
>
> Women in indigenous and local communities often hold different knowledge than men, regarding the use of biological diversity, including: traditional medicinal knowledge; knowledge of the use of seeds, as well as; knowledge of conservation and sustainable use practices for biological diversity.[68]

185. Brendan and Aguilar further note that investigations about products and species that hold considerable value for women (including agricultural and non-timber forest products, wildlife and medicinal plants)

[67] GEF-UNDP Project Document 'Building shoreline resilience of Timor-Leste to protect local communities and their livelihoods', Annex G.2: Assessment of Gender Issues in Timor-Leste, pp. 109-119 (2016).
[68] Brendan, T. and Aguilar, L. (2007). *Mainstreaming Gender Equality and Equity in ABS Governance.* IUCN: Costa Rica. pp.101

can help build recognition of women's traditional knowledge relating to biodiversity and genetic resources. Women could benefit from ABS initiatives through, for example, their involvement in product development or training and education initiatives.

186. In light of these observations and recommendations, the activities of this project have been designed to address some of the gender-related issues, as follows.

i) During the project design phase, efforts were made to ensure opportunities for both women and men to provide their perspectives on potential activities and priorities. Approximately 30% of the participants in the PPG consultation and validation workshops were women. During implementation, the project will ensure adequate representation of (and inputs from) women, local community representatives and youth (with a target of at least 40% women represented at meetings), and will hold separate consultations, as needed, with different interest groups including women, local community representatives, and youth. Particular efforts will be made to build the capacity of women and involve them, for instance, in training of trainers workshops.

ii) The project activities have been designed to ensure that any model Community Protocols, traditional knowledge surveys, PIC and MAT meet the needs of women as part of fair and equitable access and benefit sharing of genetic resources. Awareness and capacity building activities will target both women and men. Gender-disaggregated indicators have been included in the project results framework.

iii) Under Component 2, attention will be given to the need to understand the breadth and depth of traditional knowledge of environment and biodiversity resources, including the knowledge of both women and men (experience in other traditional societies, including for example in East Java, identifies women as the guardians of traditional knowledge of many species of medicinal plants[69]). Finally, as genetic resources are identified and understood in terms of customary ownership and stewardship, activities under this component will seek to ensure that improved livelihood options and other benefits are available to both women and men.

[69] Dr James Davie *pers. obs.*

SECTION 4: INSTITUTIONAL FRAMEWORK AND IMPLEMENTATION ARRANGEMENTS

188. The project will be implemented over a period of four years (48 months) starting in 2019. UN Environment will act as the GEF Implementing Agency (IA) and will be responsible for monitoring the implementation and impact of the project, reviewing progress in the realization of the project outputs, and ensuring the proper use of GEF funds. The Ministry of Development and Institutional Reform (MDIR) through its Biodiversity Directorate will be the Executing Agency (EA) and will be responsible for project coordination and management, monitoring adherence to the work plan, and administering the project funds. The MDIR will be supported in the execution, through sub-contracts and Memorandums of Agreement, by several project partners as explained below.

189. A Project Steering Committee (PSC) will be constituted to serve as the project oversight, advisory and support body for the project. The MDIR will establish a Project Management Unit (PMU) and assign a National Project Director (part-time) to coordinate the tasks of the project. In addition, a lead organisation has been defined for each outcome/output which will have the main responsibility for the implementation of the activities.

190. The project's organisational structure is shown in Figure 6 below.

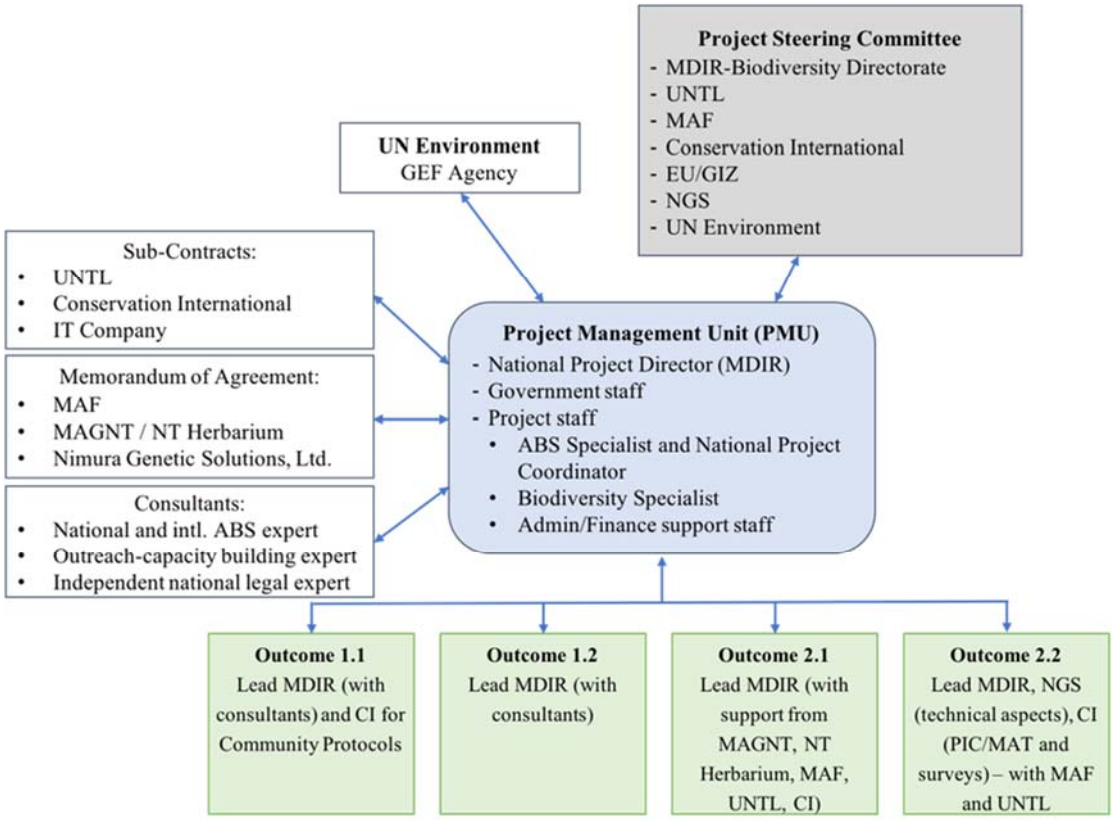


Figure 6: Project organisational structure

191. The following section describes the responsibilities of the main entities involved. A summary of the project reporting requirements and responsibilities is annexed as Appendix 7. The detailed Terms of Reference (TOR) of the project partners, staff and key experts are included in Appendix 9.

GEF Implementing Agency (IA)

192. The UN Environment Regional Office – through its GEF Task Manager (TM) and Funds Management Officer (FMO) – will be directly responsible for:

- Providing consistent and regular project oversight to ensure the achievement of project objectives.
- Providing support to the Executing Agency in ensuring the technical quality of products, outputs and deliverables produced by the project, including adherence to international best practices.
- Liaising between the project and the GEF Secretariat.
- Ensuring that both GEF and UN Environment policy requirements and standards are applied and met (i.e. reporting obligations, technical, fiduciary, M&E).
- Approving budget revisions, certifying fund availability and transferring funds.
- Organizing mid- and end-term evaluations and reviewing project audits.
- Providing technical, legal and administrative guidance if requested.
- Certifying project operational completion.

Executing Agency (EA) – Ministry of Development and Institutional Reform (MDIR)

193. The MDIR, through its National Directorate of Biodiversity Protection and Restoration, will be accountable to UN Environment for the disbursement of funds and the achievement of the project objective and outcomes, according to the approved work plan. The MDIR will be ultimately responsible for:

    - Overseeing project execution in accordance with the project results framework and budget, the agreed work plan and reporting tasks.
    - Coordinating project activities in collaboration with project partners.
    - Providing technical expertise to the project through its personnel and networks.
    - Ensuring technical quality of products, outputs and deliverables produced by the project.
    - Facilitating access to project sites and locations.
    - Establishing project sub-contracts and monitor the performance of the sub-contractors.
    - Compiling and submitting progress, financial and audit reporting to UN Environment.
    - Supporting logistical project-related issues (e.g. organization of meetings and provision of relevant facilities), as required.

194. A Project Management Unit (PMU) will be established within MDIR to lead the day-to-day management of the project activities. The PMU will be headed by the National Project Coordinator (GEF-funded), supervised by the Project Director (co-funded by MDIR), and will be composed of government staff as well as dedicated project staff. *The PMU should have adequate representation of women.*

195. The Executing Agency will be technically supported by UNTL, MAF, Conservation International, an IT company for the development of the national database, the Museum and Art Gallery of the Northern Territory (MAGNT), Nimura Genetic Solutions (NGS), and contracted experts.

Project Steering Committee (PSC)

196. The PSC will meet at least once per year in person for the annual project progress and performance assessment, and more often – e.g. through Skype or e-mail, where required. It will be composed of representatives from the MDIR, UNTL, MAF, Conservation International, the EU/GIZ to represent the Partnership for Sustainable Agro-Forestry, NGS, and UN Environment. *The PSC should have adequate representation of women.*

197. The PSC provides overall guidance and policy direction to the implementation of the project, and provides advice on appropriate strategies for project sustainability. The PSC will play a critical role in project monitoring and evaluation by assuring the quality of the project processes and products. The detailed responsibilities of the PSC include:

    - Overseeing project implementation and performance based on reports provided by the Project Management Unit (PMU).
    - Approving annual project work plans and budgets for submission to UN Environment.

- Approving any major changes in project implementation arrangements for submission to UN Environment for endorsement.
- Hosting and chairing the meetings of the PSC.
- Providing technical input and advice.
- Reviewing the quality of major project deliverables.
- Ensuring commitment of co-funding resources to support project implementation.
- Advising on any conflicts within the project and/or negotiating solutions between the project and any parties beyond the scope of the project.
- Ensuring coordination amongst member agencies.

SECTION 5: STAKEHOLDER PARTICIPATION

199. A stakeholder analysis was undertaken during the project preparation phase to identify key stakeholders, assess their interests in the project and define their potential role in the project implementation. Section 2.5 (Stakeholder mapping and analysis) describes the major categories of stakeholders identified, and the level of involvement envisaged in the project. Section 4 (Institutional framework and implementation arrangements) provides an overview of the project management arrangements, and the roles and responsibilities of the various technical executing partners.

200. As mentioned earlier, a series of consultations were held with the key stakeholders at the national and international levels to discuss different aspects of project design. This included: (i) bilateral discussions to solicit information on the current project baseline, consult on proposed project interventions and confirm the political, operational and financial commitment of project partners (including securing co-financing commitments); (ii) a consultative workshop with key stakeholders to present the project, identify opportunities for synergies and collaboration, and gather stakeholder inputs; (iii) a validation workshop to present the revised project outputs, activities, budget and implementation arrangements to the key agencies involved; and (iv) circulation of the project documentation for review and comments.

201. All four project outcomes are strategically focused on building capacity of stakeholders to ensure sustainability of project investments. Significant GEF resources are directed at building the capacities of the responsible government agencies, the private sector, civil society and academic/research institutions. The project will also seek to build the capacity of local communities, including women, to enable them to actively participate in project activities.

202. The project will encourage the participation of women in the implementation of project activities, including awareness and capacity building. As explained in Section 3.11 (Environmental and social safeguards), the activities of this project have been designed to address some of the gender-related issues by (a) ensuring adequate representation of women in the project implementation and its governance bodies; (b) ensuring that any model Community Protocols, PIC and MAT meet the needs of women as part of access to genetic resources and fair and equitable sharing of benefits arising from their utilization; and (c) valuing the breadth and depth of traditional knowledge of environment and biodiversity resources by both women and men.

SECTION 6: MONITORING AND EVALUATION PLAN

203. The project will follow UN Environment standard monitoring, reporting and evaluation processes and procedures. Substantive and financial project reporting requirements are summarized in Appendix 7. Reporting requirements and templates are an integral part of the UN Environment legal instrument to be signed by the Executing Agency and UN Environment.

204. The project M&E plan is consistent with the GEF Monitoring and Evaluation policy. The Project Results Framework presented in Appendix 3 includes SMART indicators for each expected outcome as well as mid-term and end-of-project targets. These indicators along with the key deliverables and benchmarks included in Appendix 5 will be the main tools for assessing project implementation progress and whether project results are being achieved. The means of verification and the costs associated with obtaining the information to track the indicators are summarized in Appendix 3 and Appendix 5. Other M&E related costs are also presented in the costed M&E Plan in Appendix 6 and are fully integrated in the overall project budget.

205. The M&E plan will be reviewed and revised as necessary during the project inception phase and presented for approval during the inception workshop and first PSC meeting, to ensure project stakeholders understand their roles and responsibilities vis-à-vis project monitoring and evaluation. Indicators and their means of verification may also be fine-tuned at the inception workshop. Day-to-day project monitoring is the responsibility of the Executing Agency, but other project partners will have responsibilities to collect specific information to track the indicators. It is the responsibility of the Executing Agency (MDIR) though the National Project Director to inform UN Environment of any delays or difficulties faced during implementation so that the appropriate support or corrective measures can be adopted in a timely fashion.

206. The PSC will receive annual reports on progress and will make recommendations to UN Environment concerning the need to revise any aspects of the Results Framework or the M&E plan. Project oversight to ensure that the project meets UN Environment and GEF policies and procedures is the responsibility of the Task Manager in UN Environment. The Task Manager will also review the quality of draft project outputs, provide feedback to the project partners, and establish peer review procedures to ensure adequate quality of scientific and technical outputs and publications.

207. Project supervision will take an adaptive management approach. The UN Environment Task Manager will develop a project supervision plan at the inception of the project which will be communicated to the project partners during the inception workshop. The emphasis of the Task Manager supervision will be on outcome monitoring but without neglecting project financial management and implementation monitoring. Progress vis-à-vis delivering the agreed project global environmental benefits will be assessed with the PSC at agreed intervals. Project risks and assumptions will be regularly monitored both by project partners and UN Environment. Risk assessment and rating is an integral part of the Project Implementation Review (PIR). The quality of project monitoring and evaluation will also be reviewed and rated as part of the PIR. Key financial parameters will be monitored quarterly to ensure cost-effective use of financial resources.

208. In line with the UN Environment Evaluation Policy and the GEF's Monitoring and Evaluation Policy the project will be subject to a Terminal Evaluation (TE). Additionally, a Mid-Term Review (MTR) will be commissioned and launched by UN Environment before the project reaches its mid-point.

209. The Evaluation Office will be responsible for the TE and will liaise with the Task Manager and Executing Agency throughout the process. The TE will provide an independent assessment of project performance (in terms of relevance, effectiveness and efficiency), and determine the likelihood of impact and sustainability. It will have two primary purposes: (i) to provide evidence of results to meet accountability requirements, and (ii) to promote learning, feedback, and knowledge sharing through results and lessons learned among UN Environment, the GEF, executing partners and other

stakeholders. The direct costs of the evaluation will be charged against the project evaluation budget. The Terminal Evaluation will be initiated no earlier than three months prior to the operational completion of project activities and, if a follow-on phase of the project is envisaged, should be completed prior to completion of the project and the submission of the follow-on proposal.

210. The draft Terminal Evaluation report will be sent by the Evaluation Office to project stakeholders for comments. Formal comments on the report will be shared by the Evaluation Office in an open and transparent manner. The project performance will be assessed against standard evaluation criteria using a six-point rating scheme. The final determination of project ratings will be made by the Evaluation Office when the report is finalised and further reviewed by the GEF Independent Evaluation Office upon submission. The evaluation report will be publicly disclosed and may be followed by a recommendation compliance process.

211. The GEF Biodiversity tracking tool (Objective 3 – Program 8) is attached as Appendix 13. The tracking tool will be updated at mid-term and at the end of the project and will be made available to the GEF Secretariat along with the project PIR report. As mentioned above, the mid-term and terminal evaluation will verify the information of the tracking tool.

SECTION 7: PROJECT FINANCING AND BUDGET

7.1 Overall project budget (see also Excel sheets in Appendix 1)

RECONCILIATION BETWEEN GEF ACTIVITY BASED BUDGET AND UNEP BUDGET LINE (GEF FUNDS ONLY US$)											
Project title:		Establishing the National Framework and Operational Capacity for Implementing the Nagoya Protocol in Timor-Leste									
Project number:		GEF Project ID 9703									
Project executing partner:		Ministry of Development and Institutional Reform – National Directorate for Biodiversity Protection and Restoration									
Project implementation period: 48 months											
From:	Jan.19	Expenditure by project component				Expenditure by calendar year					
To:	Dec.22										
UNEP Budget Line		Component 1	Component 2	Project Mgmt.	Total	2019	2020	2021	2022	Total	
10	**PERSONNEL COMPONENT**										
	1100 Project personnel										
	1101 ABS Specialist-National Project Coordinator	92'500	35'000	18'500	146'000	36'500	36'500	36'500	36'500	146'000	
	1102 Biodiversity Specialist	25'000	62'500		87'500	21'875	21'875	21'875	21'875	87'500	
	1199 Sub-total	**117'500**	**97'500**	**18'500**	**233'500**	**58'375**	**58'375**	**58'375**	**58'375**	**233'500**	
	1200 Consultants										
	1201 National / International ABS Expert	90'000	-		90'000	60'000	30'000	-	-	90'000	
	1202 Outreach and Capacity Building Expert	25'000	-		25'000	-	12'500	6'250	6'250	25'000	
	1203 National expert for bio-prospecting opportunities report	-	10'000		10'000	-	-	5'000	5'000	10'000	
	1204 Independent national legal expert	-	10'000		10'000	4'000	4'000	2'000	-	10'000	
	1299 Sub-total	**115'000**	**20'000**	**-**	**135'000**	**64'000**	**46'500**	**13'250**	**11'250**	**135'000**	
	1300 Administrative Support										
	1301 Admin and Finance Staff	-	-	33'600	33'600	8'400	8'400	8'400	8'400	33'600	
	1399 Sub-total	**-**	**-**	**33'600**	**33'600**	**8'400**	**8'400**	**8'400**	**8'400**	**33'600**	
	1600 Travel on official business (project staff, partners and consultants)										
	1601 Travel	61'000	176'000		237'000	48'000	76'000	73'500	39'500	237'000	
	1699 Sub-total	**61'000**	**176'000**	**-**	**237'000**	**48'000**	**76'000**	**73'500**	**39'500**	**237'000**	
1999	**Component total**	**293'500**	**293'500**	**52'100**	**639'100**	**178'775**	**189'275**	**153'525**	**117'525**	**639'100**	
20	**SUB-CONTRACT COMPONENT**										
	2100 Sub-contracts (MOUs/LOAs for cooperating agencies)										
	2101 Conservation International to support Outputs 1.1.2 and 2.2.2	27'500	50'000		77'500	20'000	27'500	20'000	10'000	77'500	
	2102 UNTL technical services to support Outputs 2.1.2 and 2.2.2	-	121'000		121'000	34'000	34'000	34'000	19'000	121'000	
	2199 Sub-total	**27'500**	**171'000**	**-**	**198'500**	**54'000**	**61'500**	**54'000**	**29'000**	**198'500**	
	2200 Sub-contracts (MOUs/LOAs for supporting organizations)										
	2201 -	-	-		-					-	
	2299 Sub-total	**-**		**-**	**-**	**-**	**-**	**-**	**-**	**-**	
	2300 Sub-contracts (for commercial purposes)										
	2301 IT Company to set up database and ABS Clearing House Mechanism	-	50'000		50'000	30'000	20'000	-	-	50'000	
	2399 Sub-total	**-**	**50'000**	**-**	**50'000**	**30'000**	**20'000**	**-**	**-**	**50'000**	
2999	**Component total**	**27'500**	**221'000**	**-**	**248'500**	**84'000**	**81'500**	**54'000**	**29'000**	**248'500**	

30	**TRAINING COMPONENT**										
	3200	Group training									
	3201	Outreach and awareness activities	60'000	-		60'000	-	15'000	30'000	15'000	60'000
	3299	**Sub-total**	**60'000**		**-**	**60'000**	**-**	**15'000**	**30'000**	**15'000**	**60'000**
	3300	Meetings/Conferences									
	3301	Workshops, Meetings, Translations	134'400	66'500		200'900	38'400	78'900	55'200	28'400	200'900
	3399	**Sub-total**	**134'400**	**66'500**	**-**	**200'900**	**38'400**	**78'900**	**55'200**	**28'400**	**200'900**
3999	**Component total**		**194'400**	**66'500**	**-**	**260'900**	**38'400**	**93'900**	**85'200**	**43'400**	**260'900**
40	**EQUIPMENT AND PREMISES COMPONENT**										
	4100	Expendable equipment									
	4101	Equipment (computer hardware and laboratory equipment)	-	71'000		71'000	-	36'000	20'000	15'000	71'000
	4199	**Sub-total**	**-**	**71'000**	**-**	**71'000**	**-**	**36'000**	**20'000**	**15'000**	**71'000**
	4200	Non-expendable equipment									
	4201	-	-			-					-
	4299	**Sub-total**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
4999	**Component total**		**-**	**71'000**	**-**	**71'000**	**-**	**36'000**	**20'000**	**15'000**	**71'000**
50	**MISCELLANEOUS COMPONENT**										
	5100	Operation and maintenance of equipment									
	5101	Operating and other costs (Software licences, product development, other operating costs)	-	32'475		32'475	5'000	16'475	7'000	4'000	32'475
	5102	Operating and other costs (PMU)	-	-	7'388	7'388	1'847	1'847	1'847	1'847	7'388
	5199	**Sub-total**	**-**	**32'475**	**7'388**	**39'863**	**6'847**	**18'322**	**8'847**	**5'847**	**39'863**
	5200	Reporting costs									
	5201	-	-	-		-					-
	5299	**Sub-total**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	5300	Sundry									
	5301	-	-	-		-					-
	5399	**Sub-total**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	5400	Hospitality and entertainment									
	5401	-	-	-		-					-
	5499	**Sub-total**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	5500	Evaluation									
	5501	Mid-term evaluation	-	-	25'000	25'000		25'000			25'000
	5502	Terminal evaluation	-	-	20'000	20'000				20'000	20'000
	5581	Other M&E costs	-	-	15'500	15'500	3'125	4'625	3'125	4'625	15'500
	5599	**Sub-total**	**-**	**-**	**60'500**	**60'500**	**3'125**	**29'625**	**3'125**	**24'625**	**60'500**
5999	**Component total**		**-**	**32'475**	**67'888**	**100'363**	**9'972**	**47'947**	**11'972**	**30'472**	**100'363**
99	**GRAND TOTAL**		**515'400**	**684'475**	**119'988**	**1'319'863**	**311'147**	**448'622**	**324'697**	**235'397**	**1'319'863**

7.2 Project co-financing

212. The project relies on critical co-financing support from project partners, including the relevant government agencies and UNTL, Conservation International, the European Union, Nimura Genetic Solutions and UN Environment. Emphasis has been placed on designing a project that is realistic and focused, with partnerships that directly contribute to the project's goal and its sustainability. The total amount of co-financing is USD 4,0500,000 and is composed of the following contributions, critical to the successful project implementation. See also Appendix 2 for details.

Co-financier	Type of Co-financing	Amount ($)
Ministry of Development and Institutional Reform (MDIR)	Cash & In-kind co-financing to support implementation of all project components as well as project management. Co-financing from MDIR will provide basic infrastructure and human resources to support implementation and sustainability of the project interventions.	1,046,000
Ministry of Agriculture and Fisheries (MAF)	Cash & In-kind co-financing to support implementation of all project components. In particular, co-financing from MAF will provide basic infrastructure (in particular, laboratory and training facilities), capacity and human resources to support implementation and sustainability of the project interventions.	1,000,000
Centre for Climate Change and Biodiversity (CCCB), National University of Timor-Leste	In-kind co-financing primarily to support implementation of Outcome 2.1 and 2.2. Co-financing from UNTL-CCCB will provide basic infrastructure, capacity and human resources to support implementation and sustainability of the project interventions.	100,000
Conservation International (CI)	In-kind co-financing to create synergies with ongoing work on capacity building, biodiversity surveys and community engagement in Timor-Leste.	454,000
European Union (EU)	In-kind co-financing for strengthening local research capacities and for the implementation of research on native plant genetic resources to be incorporated into the National Database.	1,100,000
Nimura Genetic Solutions, Ltd. (NGS)	In-kind co-financing to support the implementation of Outcomes 2.1 and 2.2. NGS will be the main source of technical support and technology transfer for Outcome 2.2.	250,000
United Nations Environment Programme (UNEP)	In-kind co-financing to support the integration of lessons learned and experiences from other countries in the region and globally, and for outreach and promotion of the project regionally. UN Environment will also provide advisory services in marine biodiversity conservation, as well as ABS and related legal aspects under the evolving national ABS legal framework.	100,000
Total Co-financing		**4,050,000**

7.3 Project cost-effectiveness

213. As noted earlier, the project builds upon current baseline activities already underway in the MDIR, MAF and UNTL, such as the establishment of the Biodiversity Directorate and the Centre for Climate Change and Biodiversity, and the existing laboratory facilities at MAF and the National Health Laboratory. It will also benefit from important co-financing contributions, in particular for Outcomes 2.1 and 2.2.

214. Costs incurred in project implementation will focus primarily on additional actions required to provide key incremental assistance to the government, private sector, research and academic organisations, and

other partner institutions in the development and implementation of a coherent ABS framework in Timor-Leste. These additional actions have been designed to be targeted and cost-effective.

215. The project will collaborate closely with ongoing interventions, existing data systems and build on experiences from other countries in the region, in order to ensure that lessons learned and information already produced in other countries can be utilized to the maximum extent possible. The project will also collaborate closely with the GEF-UNDP Cross-Cutting Capacity Development (CCCD) project in order to optimise the use of resources, in particular for the development of databases and awareness and capacity building activities.

216. As a result, the project's investment in the national ABS framework and capacity building is anticipated to be largely outweighed by the socio-economic benefits and global environmental benefits it is expected to create.

LIST OF APPENDICES

APPENDIX 1: BUDGET BY PROJECT COMPONENTS AND UNEP BUDGET LINES

Excel spreadsheet attached under separate file.

APPENDIX 2: CO-FINANCING BY SOURCE AND UNEP BUDGET LINES

Excel spreadsheet attached under separate file.

APPENDIX 3: RESULTS FRAMEWORK

Note: Only outcome indicators are provided in order to avoid repetition of deliverables/outputs that are listed in Appendix 5: Key deliverables and benchmarks.

Project Objective	Objective level Indicator	Baseline	Target	Means of Verification	Assumptions & Risks
To establish the conditions enabling sustainable access to the genetic resources of Timor-Leste, which will deliver fair and equitable benefits to its people, while protecting legal and customary ownership and traditional knowledge.	(a) Increase in overall ABS score as shown in the Tracking Tool.	Overall ABS score = 4	*Mid-term:* (a) Increase of at least 3 points in the overall ABS score as compared to the baseline. *End of project:* (a) Increase of at least 10 points in the overall ABS score as compared to the baseline.	Mid-term and final project evaluation reports Tracking Tool	Assumptions: Sector agencies and partners remain committed to supporting the implementation of ABS in Timor-Leste. Risks: Shifts in government priorities prevent an effective ABS regime.

Outcome / Output	Indicators	Baseline	Targets	Means of Verification	Assumptions & Risks
Component 1: Establishment of national legal and institutional framework on ABS, including Traditional Knowledge					
Outcome 1.1: National legal and institutional framework on ABS and the protection of traditional knowledge developed and facilitated towards adoption in accordance with the Biodiversity Decree Law.	(a) Number of policies, regulations and procedures developed as part of the national ABS framework and facilitated towards adoption. ~~(a) Availability of central government regulations/policies establishing the national framework on ABS implementation.~~ ~~(b) Number of permits granted and PIC/MAT established in accordance with the new regulations, including clauses on the sharing of monetary and/or non-monetary benefits.~~ ~~(c) Status of accession to the Nagoya Protocol.~~	None.	*Mid-term:* (a) At least 3 developed (1 policy or regulation, 1 PIC/MAT procedure, 1 Community Protocol procedure). ~~(a) Government regulations and policies drafted.~~ ~~(b) At least 2.~~ ~~(c) Necessary documentation for accession compiled.~~ *End of project:* (a) At least 3 facilitated towards adoption (i.e., submitted to decision-makers).	Final project evaluation report Regulations/policies Minutes of parliamentary sessions	Assumptions: Government remains committed to the implementation of ABS. Risks: Delays in implementation due to low priority of ABS.

Outcome / Output	Indicators	Baseline	Targets	Means of Verification	Assumptions & Risks
			~~(a) Government regulations and policies have been submitted to Parliament for adoption.~~ ~~(b) At least 4.~~ ~~(c) Accession submitted to Parliament for approval.~~		
Outcome 1.2: Increased awareness and capacity of national stakeholders on ABS principles, economic potential and procedures under the Nagoya Protocol and the national framework.	(a) Number of national stakeholders (women/men) expressing increased awareness on ABS principles, economic potential and procedures under the Nagoya Protocol and the national framework. ~~(a) Number of targeted government staff, researchers, local communities, and relevant industry players (women/men) showing increased level of awareness and understanding of the provisions, opportunities and requirements under the Nagoya Protocol, including on traditional knowledge.~~ (b) Number of staff of relevant national agencies (women/men) participating in the implementation of actions related to the national ABS framework ~~showing increased level of capacity in implementing the institutional and regulatory framework for ABS~~.	Some basic awareness built under the GEF-ASEAN project in 2013 but needs to be renewed and expanded. ~~Around 60 stakeholders participated in workshops under the GEF-ASEAN project in 2013.~~	*Mid-term:* (a) At least 20 (of which at least 40% women). (b) At least 10 (of which at least 40% women). *End of project:* (a) At least 50 (of which at least 40% women). (b) At least 20 (of which at least 40% women).	Mid-term and end-of-project awareness surveys	Risks: Awareness and capacity are not sustained over the long term due to political changes or high staff turnover.

Outcome / Output	Indicators	Baseline	Targets	Means of Verification	Assumptions & Risks
Component 2: Operationalisation of the Nagoya Protocol on research and monitoring for sustainable utilisation of genetic resources					
Outcome 2.1: Institutional capacity enhanced for enacting Article 17 on 'monitoring' and Articles 8a & 23 on 'promoting research' for sustainable use through consolidation of inventory, cataloguing and fair access to national and internationally held records on biodiversity, genetic resources and traditional knowledge of Timor-Leste.	(a) Number of staff (MDIR, MAF and UNTL) ~~trained in and~~ applying established protocols for collecting and cataloguing information for the National Database. (b) Number of agencies (CNA, CSAs) accessing and updating information on permits granted under the ABS regulations on the national ABS Clearing House Mechanism. (c) Number of entries in the National Database on biodiversity, genetic resources and traditional knowledge.	(a) and (b) None. Various biodiversity surveys conducted in the past, but limited data sharing and integration. (c) Database of 35 forest and agroforestry species under the GCCA project, 500 species/varieties under the Agro-Biodiversity Project.	*Mid-term:* (a) At least 10 (of which 50% women). (b) At least 2. (c) 0 *End of project:* (a) At least 20 (of which 50% women). (b) At least 4. (c) At least 1,000.	Project reports Database and national ABS CHM	Assumptions: Partner institutions remain committed to supporting the implementation of ABS in Timor-Leste. Risks: Political factors negatively affect the viability of research partnerships.
Outcome 2.2: Enhanced technological and business capacity for bio-prospecting in Timor-Leste, in compliance with the Nagoya Protocol on sustainable utilisation of genetic resources.	(a) Number of staff (women/men) participating ~~trained~~ in bio-prospecting, laboratory management, and product trials. (b) Number of resources identified through genetic and/or chemicals screening towards potential commodity development for food, medical, cosmetic or other applications.	None. Existing laboratories at UNTL and MAF but no bio-prospecting capacity available.	*Mid-term:* (a) At least 6 (of which 50% women). (b) 0 *End of project:* (a) At least 10 (of which 50% women). (b) At least 3.	Project reports Bio-prospecting opportunities report	Assumptions: Partner institutions remain committed to supporting the bio-prospecting trials in Timor-Leste.

UNEP MTS reference*
Sub-programme 4: Environmental Governance

SDG Target 15.6:
Promote fair and equitable sharing of the benefits arising from the utilization of genetic resources and promote appropriate access to such resources, as internationally agreed.

APPENDIX 4: WORK PLAN AND TIMETABLE

Excel spreadsheet attached under separate file.

APPENDIX 5: KEY DELIVERABLES AND BENCHMARKS

KEY ACTIVITIES	KEY DELIVERABLES	KEY BENCHMARKS
Component 1: Establishment of national legal and institutional framework on ABS, including Traditional Knowledge.		
Outcome 1.1: National legal and institutional framework on ABS and the protection of traditional knowledge developed and facilitated towards adoption in accordance with the Biodiversity Decree Law.		
Output 1.1.1: National regulatory, policy and institutional framework developed and facilitated towards adoption by the government for implementation of the Nagoya Protocol through a process of national consultations, a government brief and National Operational Guidelines.		
Carry out a gap analysis of the existing legislative and institutional framework	Deliverable 1.1.1a) Detailed report of analysis and recommendations	Year 1, Q3
Draft required instructions and regulations on ABS for Timor-Leste	Deliverable 1.1.1b) Comprehensive draft ABS instructions and regulations	Year 1, Q4
Prepare a government brief on the proposed regulatory and institutional framework and the economic potential and value of genetic resources and traditional knowledge	Deliverable 1.1.1c) Government brief	Year 2, Q1
Prepare National Operational Guidelines	Deliverable 1.1.1d) National Operational Guidelines	Year 2, Q2
Output 1.1.2: Nationally agreed model Community Protocols developed based on local indigenous practices, beliefs and customary law to guide access to traditional knowledge associated with genetic resources.		
Draft model Community Protocols	Deliverable 1.1.2a) Model Community Protocols	Year 2, Q2
Output 1.1.3: National specific ABS model agreements (PIC, MAT) developed that facilitate the negotiation of monetary and non-monetary benefits between users and providers of genetic resources.		
Develop model ABS agreements (PIC, MAT)	Deliverable 1.1.3a) Model ABS agreements (PIC, MAT) as part of the national ABS framework	Year 2, Q2
Output 1.1.4: High-level dialogue established with policy makers and Parliament to make the case for the Nagoya Protocol and the national ABS framework, emphasising their potential for adding value through research & development, and their contribution to the Sustainable Development Goals (SDGs).		
Hold regular high-level consultations	Deliverable 1.1.4a) Submission to Parliament of the national ABS framework	Year 3, Q2
Output 1.1.5: Information required for formal accession to the Nagoya Protocol made available to the Government of Timor-Leste and accession process started.		
Compile the information, data and documents required for the formal accession to the Nagoya Protocol	Deliverable 1.1.5a) Documentation with required information	Year 3, Q2

KEY ACTIVITIES	KEY DELIVERABLES	KEY BENCHMARKS
Outcome 1.2: Increased awareness and capacity of national stakeholders on ABS principles, economic potential and procedures under the Nagoya Protocol and the national framework.		
Output 1.2.1: An outreach and institutional development plan on ABS issues prepared in Tetum language based on needs assessments.		
Develop an outreach and institutional development plan	Deliverable 1.2.1a) Training needs assessment report and outreach and institutional development plan	Year 2, Q1
Prepare training and awareness materials in the Tetum language	Deliverable 1.2.1b) Training and awareness materials	Year 2, Q2
Output 1.2.2: National outreach campaign implemented on the provisions of the Nagoya Protocol, the evolving national ABS framework, and the role of ABS for genetic resource-based innovation and adding value in meeting the SDGs.		
Implement outreach and awareness activities as defined in the outreach and institutional development plan	Deliverable 1.2.2a) Baseline awareness and capacity assessment report Deliverable 1.2.2b) Report on outreach and awareness activities Deliverable 1.2.2c) End-of-project awareness impact monitoring report	Year 3, Q4
Output 1.2.3: Targeted training carried out for 50 staff of the Competent National Authority, the Competent Sector Authorities, the National Focal Point and related research agencies on national institutional, regulatory and implementation framework for ABS.		
Implement training activities as defined in the outreach and institutional development plan	Deliverable 1.2.3a) Report on training activities (including follow-up activities and on-the-job training) Deliverable 1.2.3b) End-of-project capacity impact report	Year 3, Q4
Component 2: Operationalisation of the Nagoya Protocol on research and monitoring for sustainable utilisation of genetic resources.		
Outcome 2.1: Institutional capacity enhanced for enacting Article 17 on 'monitoring' and Articles 8a & 23 on 'promoting research' for sustainable use through consolidation of inventory, cataloguing and fair access to national and internationally held records on biodiversity, genetic resources and traditional knowledge of Timor-Leste.		
Output 2.1.1: Consolidated National Database on biodiversity, genetic resources and traditional knowledge, and national ABS Clearing House Mechanism, established.		
- Establish Memorandum of Agreement between MDIR and MAGNT/NT Herbarium - Establish a National Database and national ABS CHM	Deliverable 2.1.1a) Signed Memorandum of Agreement Deliverable 2.1.1b) National Database and ABS CHM	Year 2, Q1 Year 2, Q4

KEY ACTIVITIES	KEY DELIVERABLES	KEY BENCHMARKS
Output 2.1.2: Protocols established for the National Database and the national ABS Clearing House Mechanism on collecting, cataloguing, permitting and monitoring of fair access to scientific records and traditional knowledge in Timor-Leste, and existing information incorporated into the database.		
- Develop simple protocols and establish clear responsibilities - Collect existing information on biodiversity, genetic resources and traditional knowledge	Deliverable 2.1.2a) Compilation/manual of protocols for the National Database and the ABS CHM (including roles and responsibilities for update and maintenance as defined in the national ABS framework) Deliverable 2.1.2b) Compilation of existing information on biodiversity, genetic resources and traditional knowledge	Year 2, Q4 Year 3, Q4
Outcome 2.2: Enhanced technological and business capacity for bio-prospecting in Timor-Leste, in compliance with the Nagoya Protocol on sustainable utilisation of genetic resources.		
Output 2.2.1: Memorandum of Agreement on Technical Collaboration signed between MDIR/MAF/UNTL and Nimura Genetic Solutions (NGS Japan) on multiple-year collaborative research and capacity building for bio-prospecting.		
Hold meetings and sign Memorandum of Agreement with NGS	Deliverable 2.2.1a) Signed Memorandum of Agreement	Year 1, Q4
Output 2.2.2: Bio-prospecting trials implemented, enabled through PIC and MAT agreements with the provider(s) of the genetic resources, and through technology transfer in research and development.		
Implement multiple-year collaborative research and capacity building	Deliverable 2.2.2a) Report on the implementation of the collaborative research and capacity building, indicating the number of PIC/MAT established, the traditional knowledge inventories conducted, the number of staff (women/men) trained and the number of resources identified towards potential commodity development.	Year 4, Q1
Output 2.2.3: Existing and new opportunities for bio-prospecting projects in e.g. the agricultural, crop protection, food/beverage, botanical, cosmetics or pharmaceutical industries identified.		
Produce and disseminate report on bio-prospecting opportunities in Timor-Leste	Deliverable 2.2.3a) Report on bio-prospecting opportunities	Year 4, Q2

APPENDIX 6: COSTED MONITORING AND EVALUATION PLAN

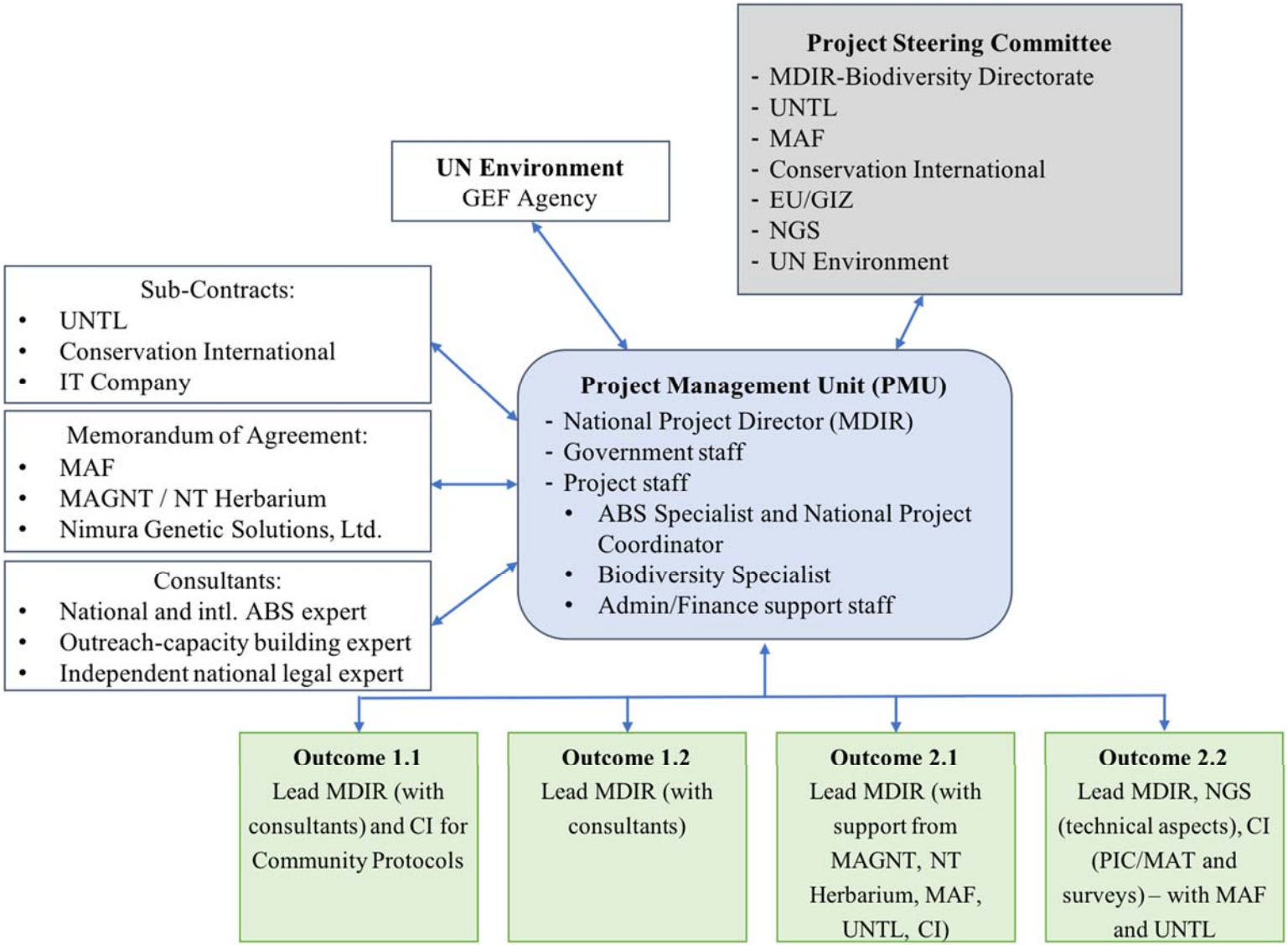
Appendix 6: Monitoring and Evaluation Budget and Work Plan				
Type of M&E activity	**Responsible Parties**	**Budget from GEF**	**Budget co-finance**	**Timeframe**
Inception Meeting*	MDIR, UNEP	6'000	0	Within 2 months of project start-up
Inception Report*	MDIR	500	500	1 month after project inception meeting
Measurement of project indicators *(outcome, progress and performance indicators, GEF tracking tools)* at national level**	MDIR, UNEP	7'000	0	Outcome indicators: start, mid and end of project
				Progress/perform. Indicators: annually
Semi-annual Progress/Operational Reports to UNEP*	MDIR	1'000	1'000	Within 1 month of the end of reporting period i.e. on or before 31 January and 31 July
Project Steering Committee meetings**	MDIR, UNEP	8'500	4'000	Once a year minimum
Reports of PSC meetings*	MDIR, UNEP	1'500	1'500	Annually
Project Implementation Report (PIR)*	MDIR	1'500	1'500	Annually, part of reporting routine
Monitoring visits to field sites, if relevant*	MDIR	5'000	5'000	As appropriate
Mid Term Review**	MDIR, UNEP	20'000	0	At mid-point of project implementation
Terminal Evaluation**	UNEP	25'000	0	Within 6 months of end of project implementation
Audit**	MDIR	4'000	4'000	Annually
Project Final Report*	MDIR	1'500	1'500	Within 2 months of the project completion date
Co-financing report*	MDIR	500	500	Within 1 month of the PIR reporting period, i.e. on or before 31 July
Publication of Lessons Learnt and other project documents*	MDIR, UNEP	10'000	2'000	Annually, part of Semi-annual reports & Project Final Report
Total M&E Plan Budget		**92'000**	**21'500**	

*Budget included in components **Budget included in M&E/PMC budget

APPENDIX 7: SUMMARY OF REPORTING REQUIREMENTS AND RESPONSIBILITIES

Reporting requirements	Due date	Format appended to legal instrument as	Responsible Party
Procurement Plan	2 weeks before project inception meeting	Appendix 6	MDIR
Inception Report	1 month after project inception meeting	n/a	MDIR
Preparation of project work plans and budgets	Annually as part of the PSC meetings	Same as in ProDoc	MDIR
Quarterly Expenditure Report with appropriate notes	Quarterly on or before 30 April, 31 July, 31 October, 31 January	n/a	MDIR
Cash Advance request and details of anticipated disbursements (to be submitted along with the expenditure reports)	Quarterly or when required	n/a	MDIR
Semi-Annual Progress Report	Half-yearly on or before 31 January, 31 July	Annex 8	MDIR
Audited report for expenditures for year ending 31 December	Yearly on or before 30 June	n/a	MDIR
Inventory of non-expendable equipment	Yearly on or before 31 January	n/a	MDIR
Co-financing report (to be reported quarterly along with the GEF expenditure in the quarterly expenditure reports)	Yearly on or before 31 July	n/a	MDIR
Project implementation review (PIR) report	Yearly on or before 15 July	Annex 9	MDIR
Minutes of PSC meetings	Yearly	n/a	MDIR
Final Report	2 months after project closure / technical completion	Annex 10	MDIR
Final inventory of non-expendable equipment	2 months after project closure/ technical completion	n/a	MDIR
Equipment transfer letter	2 months after project closure/ technical completion	Annex 10	MDIR
Final expenditure statement	3 months from project completion date	Annex 11	MDIR
Mid-Term Review	Midway through project	n/a	UN Environment
Final audited report for expenditures of project	6 months from project completion date	n/a	MDIR
Independent Terminal Evaluation report	At the end of project or 6 months from project completion date	Available with UN Environment	UN Environment

APPENDIX 8: ORGANISATIONAL CHART



APPENDIX 9: TERMS OF REFERENCE OF KEY PARTNERS, PROJECT STAFF AND EXPERTS

A. Project Partners

Centre for Climate Change and Biodiversity (CCCB) at UNTL

The CCCB at UNTL will have the following responsibilities:

- Under the umbrella of the Centre for Climate Change and Biodiversity (CCCB), provide leadership and assign research staff/students to support the implementation of Outcomes 2.1 and 2.2.
- Work closely with MDIR, MAF and the Museum and Art Gallery of the Northern Territory on developing and implementing the protocols on collecting and cataloguing information of biological and genetic resources, and on collecting existing information to be incorporated into the National Database (Output 2.1.2).
- Host the National Database on biodiversity, genetic resources and traditional knowledge and ensure its maintenance and update during and after the project.
- Work closely with Nimura Genetic Solutions on technology transfer in research and development through conducting institutional development and biochemical and genetic screening trials under the bio-prospecting partnership (Output 2.2.2).
- Assign research staff/students to support the surveys to be implemented under Output 2.2.2. In addition to the Faculty of Agriculture, seek to involve other faculties, in particular the Faculty of Social Sciences for research on traditional knowledge and the role of rural women as holders of genetic resources and associated traditional knowledge.

Ministry of Agriculture and Fisheries (MAF)

MAF will have the following responsibilities:

- Support MDIR in the implementation of all outcomes of the project, including the development of the national ABS framework, the outreach and capacity building activities, the establishment of the National Database and the national ABS Clearing House Mechanism, as well as the bio-prospecting partnership.
- Work closely with the Outreach and Capacity Building Expert to develop and implement the outreach and institutional development plan (Outcome 1.2).
- Designate trainers or champions within MAF and adjust relevant terms of reference for the implementation of the capacity building activities, the national ABS framework, the National Database and the ABS CMH, as well as the bio-prospecting partnership.

Conservation International

Conservation International will have the following responsibilities:

- In close collaboration with the project team and based on experience from other countries in the region, lead the development of nationally agreed model Community Protocols based on local indigenous practices, beliefs and customary law to guide access to traditional knowledge associated with genetic resources (Output 1.1.2). This will be done based on experience from existing community engagement projects and following the process described in the work plan.
- Facilitate the implementation of the Community Protocols and the Prior Informed Consent (PIC) and Mutually Agreed Terms (MAT) procedures in two selected field sites (one terrestrial site in Baucau and one marine/coastal site in Atauro) for the traditional knowledge surveys and sampling of genetic resources to be conducted under Output 2.2.2, following the process described in the work plan.
- Support the implementation of awareness and community capacity building activities (including for women and youth) in the field survey sites as part of the national outreach campaign (Output 1.2.2).
- Facilitate the inventories of traditional knowledge and the sampling of genetic resources for the bio-prospecting trials under Output 2.2.2.

- Be responsible for appropriate community facilitation, communications and capacity building related to activities on traditional knowledge, inventories and market and product development – in close collaboration with the lead technical partners on each of these aspects.
- Support the integration of the survey data into the newly established National Database.

IT company

217. The IT company will have the following responsibilities:

- In close collaboration with the project team, lead the development of the National Database on biodiversity, genetic resources and traditional knowledge, and of the national ABS Clearing House Mechanism (Output 2.1.1). The database should be designed in a simple and effective way in order to ensure that it can be sustained and maintained after the project ends.
- Build capacity of the staff at the CCCB at UNTL for maintenance and update of the database.

Museum and Art Gallery of the Northern Territory (MAGNT)

218. MAGNT is expected to have the following responsibilities:

- Provide advice and technical support for the establishment of the National Database (including virtual library of specimens) under Output 2.1.1.
- Support data exchange, capacity building and mentoring of national staff, including staff selection.
- Support the development of simple protocols for the collection, cataloguing and documentation of information on biological and genetic resources as well as traditional knowledge under Output 2.1.2.

Nimura Genetic Solutions, Ltd. (NGS)

219. NGS will have the following responsibilities:

- Provide advice and technical support for the establishment, utilisation, operation and maintenance of the laboratories under Output 2.2.2.
- Support the implementation of the multiple-year collaborative research and capacity building in accordance with the Memorandum of Agreement that will be discussed and established during the first year of the project.
- Be responsible to establish collaborative agreements with prospective corporate sector, research and development institutions, foremost from Japan, in support of inventories, bio-prospecting and market development.
- Support the development of work plans that will include:
  - Completion of PIC and MAT arrangements;
  - Approved methodologies for specimen preservation and cataloguing, photography and tissue sampling where applicable for taxonomic or bio-prospecting purposes (ensuring sustainable harvesting practices and the safe disposal of chemical waste from laboratory activities);
  - Agreed processes on traditional knowledge, including documentation, testing the depth and veracity of traditional knowledge, and assessment of proprietary rights, including customary rights; and
  - Protocols for sharing of knowledge and other matters related to potential benefit sharing mechanisms consistent with local customs.
- Provide on-the-job training and support the organisation of international exchanges (e.g., with Indonesia, Malaysia) on screening for genetic and bio-chemical resources for staff at the laboratory. Travel expenses for NGS will be covered by the project. Laboratory and equipment costs will be funded through ongoing investments at MAF's Seed and Soil Laboratory and the National Health Laboratory. Some additional equipment will be covered by the project.

- Contribute to Output 2.2.3 on identifying existing and potential opportunities for bioprospecting, product development and marketing. Help build institutional capacity with small and medium enterprises (SMEs) on marketing strategies and business planning.

B. Project Management Unit (PMU) staff

National Project Director (MDIR)

1. Title of Position: National Project Director (funded by MDIR, part-time)
2. Position Location: Ministry of Development and Institutional Reform, Dili
3. Reports to: Project Steering Committee (PSC)
4. Date of TOR: January 2019 – December 2022
5. Supervises: National Project Coordinator
6. Major Functions
    - Be accountable to the PSC for the delivery of agreed project outputs.
    - Supervise the work of the Project Management Unit (PMU), signing off on all formal project reports, budgets, expense reports and audits; and forging/facilitating national partnerships.
    - Supervise the work of the consultants and working groups.
7. Context and Tasks
    - Lead on the selection and procurement of the consultants and sub-contractors.
    - Draft and approve terms of reference and selection of sub-contractors, consultants and conduct procedures for initiating sub-contracts.
    - Sign off on all formal and final project reports, progress reports, cash advance requests and expenditure reports prepared by the ABS Specialist and National Project Coordinator and/or the Administrative and Finance support staff.
    - Ensure the project coordination, management and reporting by the PMU is timely and of high quality; as well as meeting GEF and UN Environment requirements.
    - Ensure that financial and technical outputs are effectively delivered.
    - Coordinate provision of committed in-kind and in-cash co-finance contributions for the project.
    - Identify any additional partnerships for enhanced project implementation, strengthening sustainability, or its replication, including through new co-financing contributions from international, national or local sources to finance project components of the project as these evolve.
    - Liaise with counterparts – including at the local level and in other sectors to ensure that cross-sectoral linkages are developed and maintained.
    - Maintain regular contact with UN Environment and any international partners.
    - Provide policy guidance to the project.
    - Oversee public relations of the project.
    - Report to UN Environment and the PSC any irregularities in project execution, misuse of funds or procedures, or problems in project execution at a timely basis.
    - Organise and participate in the PSC meetings.

ABS Specialist and National Project Coordinator (GEF-funded)

1. Title of Position: ABS Specialist and National Project Coordinator

2. Position Location: Ministry of Development and Institutional Reform, Dili
3. Reports to: National Project Director
4. Date of TOR: January 2019 – December 2022 (full-time, 48 months)
5. Supervises: Project Management Unit, consultants
6. Major Functions

- Support and be responsible to the National Project Director on the management of the project.
- Lead the PMU and project on a day-to-day basis.
- Overall technical responsibility for the direction of the project, detailed work planning, financial management and the timely delivery and quality of outputs including reports.
- Support the National Project Director in supervising the work of the consultants and working groups.

7. Context and Tasks

- Lead the project technical and administrative staff team.
- Provide technical coordination for the implementation of the project according to the project document.
- Ensure that essential steps in the implementation of the project are undertaken in a technically sound, timely and transparent fashion.
- Draft terms of reference and selection of sub-contractors, consultants and conduct procedures for initiating sub-contracts.
- Ensure the timely delivery of project outputs, activities and other deliverables by the project; assuring those are of high quality and prepared in a timely manner, including those prepared by project staff, consultants and sub-contractors.
- Reporting to the National Project Director any problems or challenges with regard to the financial, institutional and technical implementation of the project.
- Be responsible for and/or prepare the financial and technical reports such as Quarterly Expense Reports, Quarterly Advance Statements, Audits, Semi-Annual Progress Reports, Annual PIR Reports, Draft Final Project Report and any other required reports.
- Be responsible for project M&E, including the risk mitigation plan and gender integration; participate in M&E missions.
- Prepare drafts for proposed budget reallocations or revisions, consult with National Project Director and obtain approval by the PSC as well as UN Environment to formalise these annually as part of the GEF budget reconciliation.
- Participate in the preparation of publications that may result from the project.
- Participate in external meetings (conferences, seminars, workshops) as required.

<u>Biodiversity Specialist (GEF-funded)</u>

1. Title of Position: Biodiversity Specialist
2. Position Location: Ministry of Development and Institutional Reform, Dili
3. Reports to: ABS Specialist-National Project Coordinator
4. Date of TOR: January 2019 – December 2022 (full-time, 48 months)
5. Major Functions

- Lead the implementation of Output 2.1.2, in particular the collection of existing information on biodiversity, genetic resources and traditional knowledge of Timor-Leste.

- Coordinate the development of the National Database and the national ABS Clearing House Mechanism with the IT company.
- Ensure the integration of existing information into the new database system.
- Support the Technical Project Officer in implementing the project activities that involve data and information management.
- Support the implementation of the training activities as defined in the outreach and institutional development plan (Output 1.2.3), in close collaboration with the Outreach and Capacity Building Expert.
- Support the implementation of bio-prospecting activities (Output 2.2.2), in particular for technical, biodiversity-related aspects.

6. Context and Tasks

- Consult with project partners on the design of the National Database and the national ABS Clearing House Mechanism.
- Coordinate the development of the National Database and the national ABS Clearing House Mechanism with the IT company and supervise its implementation.
- Collect existing information on biodiversity, genetic resources and traditional knowledge of Timor-Leste from a variety of national and foreign sources.
- Liaise with national and international partner organisations, including UNTL and MAF, to ensure the integration of existing information into the new database.
- Participate in other project meetings as required.
- Implement training activities as defined in the outreach and institutional development plan (Output 1.2.3), in close collaboration with the Outreach and Capacity Building Expert.
- Support the implementation of bio-prospecting activities (Output 2.2.2), in particular for technical, biodiversity-related aspects.

<u>Administrative and Finance support staff (GEF-funded, part-time)</u>

1. Title of Position: Administrative and Finance support staff
2. Position Location: Ministry of Development and Institutional Reform, Dili
3. Reports to: ABS Specialist-National Project Coordinator
4. Date of TOR: January 2019 – December 2022 (part-time, around 40% for 48 months)
5. Context and Tasks

- Oversee the planning, coordination and implementation of administrative policies, procedures and systems, and ensure these are efficient and effective.
- Oversee the planning, coordination and implementation of financial policies, procedures and systems, (including anti-fraud policies) and ensure these are efficient and effective.
- Prepare detailed budgets.
- Maintain accounts and financial records.
- Manage the project's assets (e.g. equipment) and asset register.
- Prepare monthly, quarterly and annual financial reports.
- Prepare relevant documents for internal and external financial audits.
- Participate in financial audits.

C. Key Experts (Consultants)

National and International ABS Expert (consultants)

1. Title of Position: National ABS Expert / International ABS Expert
2. Position Location: Ministry of Development and Institutional Reform, Dili
3. Reports to: ABS Specialist-National Project Coordinator
4. Date of TOR: January 2019 – December 2022
5. Context and Tasks

- Lead the development of the national regulatory, policy and institutional framework for implementation of the Nagoya Protocol (Output 1.1.1), in particular the following tasks:
    - Carry out a gap analysis of the existing legislative and institutional framework related to ABS in Timor-Leste (building on previous assessments), including analysis of local level legislation and mandates of sector agencies.
    - Draft required instructions and regulations on ABS for Timor-Leste based on the regulatory scheme proposed in earlier reports and in accordance with the current legislation. Revise as needed based on national and local consultations.
    - Prepare a government brief on the proposed regulatory and institutional framework.
    - Prepare National Operational Guidelines that can be used as a reference document for ABS implementation in Timor-Leste.
- Develop model agreements (PIC, MAT) that facilitate the negotiation of monetary and non-monetary benefits between users and providers of genetic resources (for commercial and non-commercial uses) (see details under Output 1.1.3).
- Support the compilation of the information, data and documents required for the formal accession to the Nagoya Protocol (Output 1.1.5).
- Support the drafting of a report on the bio-prospecting opportunities in Timor-Leste (Output 2.2.3) (*note: could be same or different consultants for this output).

Outreach and Capacity Building Expert (consultant)

1. Title of Position: Outreach and Capacity Building Expert (national consultant)
2. Position Location: Ministry of Development and Institutional Reform, Dili
3. Reports to: ABS Specialist-National Project Coordinator
4. Date of TOR: January 2019 – December 2022
5. Context and Tasks

- Based on consultations with stakeholders, develop an outreach and institutional development plan defining actions to build awareness and capacity on ABS issues, tailored to the needs of different stakeholders (government agencies, research institutions/academia, indigenous and local communities, private sector, media; women and youth). Prepare training and awareness materials in the Tetum language. (Output 1.2.1)
- Lead the implementation of the outreach and awareness activities as defined in the outreach and institutional development plan. (Output 1.2.2)
- Lead the implementation of the training activities as defined in the outreach and institutional development plan. (Output 1.2.3)
- Support the development of measures to ensure that the capacity building activities are sustained after the project ends.

- Support appropriate community facilitation, communications and capacity building related to activities on traditional knowledge, inventories and market and product development – in close collaboration with the lead technical partners on each of these aspects.
- Support the evaluation of stakeholder capacity at mid-term and end-of-project.

APPENDIX 10: CO-FINANCING COMMITMENT LETTERS FROM PROJECT PARTNERS

Ministerio do Desenvolvimento e Reforma Institucional

Gabinete do Vice Ministro Desenvolvimento Para Habitação, Ordenamento e Ambiente

Direcão Geral Ambiente
Rua Don Boa Ventura, No 16. Mandarin-Dili
Telp: 77327062, Email: soaresjoaocarlos@ymail.com

Ref. No : 102 */DGA/IV/2018* *Dili. April 5. 2018*

Ms. Kelly West, GEF Coordinator
GEF Coordination Office
UN Environment
Nairobi, Kenya

Subject: Co-financing support for the GEF STAR-6 project "Establishing the National Framework and Operational Capacity for Implementing the Nagoya Protocol in Timor-Leste" (GEF project ID 9703)

Dear Ms. Kelly West.

On behalf of the Ministry of Development and Institutional Reform. Cabinet of Vice Minister of Development for Housing, Spatial Planning and Environment, Directorate General for Environment, I am pleased to commit **USD 1,046,000** in co-financing (USD 500,000 in cash and USD 546,000 in kind) to support the achievement of the objectives and outcomes of the above-mentioned GEF funded project in Timor-Leste.

The amount will be roughly divided as follows.

Component 1	470,700
Component 2	470,700
Project Management Cost (PMC)	104,600
	1,046,000

This contribution as described above is intended to qualify as co-financing should the project proposal be successful.

Sincerely,

João Carlos Soares
Director General of Environment,
GEF Operational Focal Point

Copy: - Max Zieren, Task Manager & Regional Focal Point Asia, UN Environment

MINISTÉRIO DA
AGRICULTURA
E PESCAS

DIRECÇÃO GERAL DAS
FLORESTAS, CAFÉ E
PLANTAS INDUSTRIAIS

GABINETE DIRETOR GERAL

Rua : Caicoli-Dili, Timor-Leste
Telp : 3310052

No. 223/GDGFCPI-MAP/VI/2018

Ms. Kelly West, GEF Coordinator
GEF Coordination Office
UN Environment
Nairobi, Kenya

Subject: Co-financing support for the GEF STAR-6 project "Establishing the National Framework and Operational Capacity for Implementing the Nagoya Protocol in Timor-Leste" (GEF project ID 9703)

Dear Ms. Kelly West,

On behalf of the Ministry of Agriculture and Fisheries (MAF), I am pleased to commit **USD 1,000,000** in co-financing (of which USD 300,000 in cash and USD 700,000 in kind) to support the achievement of the objectives and outcomes of the above-mentioned GEF funded project in Timor-Leste.

MAF will support the implementation of all four project outcomes, in particular through:

- Supporting the development of the national regulatory and institutional framework on ABS in line with national legislation and existing procedures and mandates of relevant directorates, including for permits with regard to protected areas, forestry, agriculture and fisheries.
- Supporting outreach and capacity building activities for the implementation of ABS procedures within the relevant directorates of MAF.
- Contributing to the development of a National Database on biological and genetic resources of Timor-Leste by collaborating and sharing research data, and providing inputs to the development of a national ABS Clearing House Mechanism.
- Contributing to the bio-prospecting trials by sharing relevant expertise and experience and, where relevant, laboratory capacity.

The amount will be roughly divided as follows.

Component 1	450,000
Component 2	550,000
	1,000,000

This contribution as described above is intended to qualify as co-financing should the project proposal be successful.

Sincerely,

Manuel Mendes
General Director

Copy: - Joao Carlos Soares, Director General of Environment, GEF OFP Timor-Leste
- Max Zieren, Task Manager & Regional Focal Point Asia, UN Environment

CENTER FOR CLIMATE CHANGE AND BIODIVERSITY – CCCB
UNIVERSIDADE NACIONAL TIMOR LOROSA'E
Avenida Cidade de Lisboa, Tlp. +670 77271436, 77275527
E– mail: adaosoaresb@yahoo.com
Website: http://www.centre-climatechange-biodiversity-tl.org

Dili, 13 April 2018

Ms. Kelly West, GEF Coordinator
GEF Coordination Office
UN Environment
Nairobi, Kenya

Subject: Co-financing support for the GEF STAR-6 project "Establishing the National Framework and Operational Capacity for Implementing the Nagoya Protocol in Timor-Leste" (GEF project ID 9703)

Dear Ms. Kelly West,

On behalf of Centre for Climate Change and Biodiversity (CCCB) of the National University of Timor Lorosa'e (UNTL), I am pleased to commit USD 100,000 in co-financing in the form of in-kind contribution to support the achievement of the objectives and outcomes of the above-mentioned GEF funded project in Timor-Leste.

This contribution as described above is intended to qualify as co-financing should the project proposal be successful.

Sincerely,

Adao Soares Barbosa
Director CCCB

Copy: - Joao Carlos Soares, Director General of Environment, GEF OFP Timor-Leste
- Max Zieren, Task Manager & Regional Focal Point Asia, UN Environment

CONSERVATION INTERNATIONAL
Timor-Leste

7th June 2018

Ms. Kelly West, GEF Coordinator
GEF Coordination Office
UN Environment
Nairobi, Kenya

Subject: Co-financing support for the GEF STAR-6 project "Establishing the National Framework and Operational Capacity for Implementing the Nagoya Protocol in Timor-Leste" (GEF project ID 9703)

Dear Ms. Kelly West,

On behalf of Conservation International, I am pleased to commit USD 454,000 in co-financing in the form of in-kind contribution to support the achievement of the objectives and outcomes of the above-mentioned GEF funded project in Timor-Leste.

In particular, this co-financing support will consist of the following:

- Supporting Outcomes 1.1, 1.2 and 2.2 of the project through ongoing (non-GEF) investments in biodiversity surveys, capacity building and community engagement, in particular in Atauro Island as well as Mt. Legumau in Baucau municipality.
- Supporting Outcome 1.1 through ongoing support by CI to MAF in preparing MOUs with foreign research institutions.
- Supporting Outcome 2.1 of the project by contributing to the development of a National Database on biodiversity, genetic resources and traditional knowledge of Timor-Leste based on CI's experience and knowledge of the country's biodiversity.

This contribution as described above is intended to qualify as co-financing should the project proposal be successful.

Sincerely,

[signature]

Copy: - Joao Carlos Soares, Director General of Environment, GEF OFP Timor-Leste
- Max Zieren, Task Manager & Regional Focal Point Asia, UN Environment

EUROPEAN UNION
DELEGATION TO TIMOR-LESTE
The Head of Cooperation

Dili, 11 MAY 2018
Ref. Ares (2018)2470160

Ms. Kelly West
GEF Coordinator
GEF Coordination Office
UN Environment
Nairobi, Kenya

Subject: **Co-financing support for the GEF STAR-6 project "Establishing the National Framework and Operational Capacity for Implementing the Nagoya Protocol in Timor-Leste" (GEF project ID 9703)**

Dear Ms. Kelly West,

On behalf of the Delegation of the European Union to Timor-Leste, I am pleased to commit approximately EUR 1 million in co-financing in the form of in-kind contribution under the Partnership for Sustainable Agro-Forestry (PSAF) to support the achievement of the objectives and outcomes of the above-mentioned GEF funded project in Timor-Leste.

In particular, the PSAF will contribute to Outcome 2.1 of the GEF project through its adaptive research approach, which aims to identify suitable (native and introduced) forestry and agroforestry species. The adaptive research will be implemented in cooperation with local and international institutions with the aim of strengthening local research capacities. The data collected on native genetic resources will contribute to the database to be established under the GEF project.

This contribution as described above is intended to qualify as co-financing should the project proposal be successful.

Sincerely,

Simon le Grand

Copy: - Joao Carlos Soares, Director General of Environment, GEF OFP Timor-Leste
- Max Zieren, Task Manager & Regional Focal Point Asia, UN Environment

Palm Business & Trade Centre, 4th floor, Block D, Surik Mas, Rua de Fatumeta, Dili, Timor-Leste | PO. Box: 614
Tel. (+670) 3 311 580 Fax (+670) 3 311 581 / 582 | E-mail: delegation-timor-leste@eeas.europa.eu

NGS

June 6th, 2018

Ms. Kelly West, GEF Coordinator
GEF Coordination Office
UN Environment
Nairobi, Kenya

Subject: Co-financing support for the GEF STAR-6 project"Establishing the National Framework and Operational Capacity for Implementing the Nagoya Protocol in Timor-Leste" (GEF project ID 9703)

Dear Ms. Kelly West,

On behalf of Nimura Genetic Solutions Ltd. (NGS), I am pleased to commit USD 250,000 in co-financingin the form of in-kind contribution to support the achievement of the objectives and outcomes of the above-mentioned GEF funded project in Timor-Leste.

In particular, NGS' support will contribute to Component 2 of the project by providing technical support, technology transfer and training forthe bio-prospecting activitiesincluding business development and for the operation of the bio-prospecting laboratory.

This contribution as described above is intended to qualify as co-financing should the project proposal be successful.

Sincerely,

Nimura Satoshi
Managing Director
Nimura Genetic Solutions Co., Ltd.

Copy: - Joao Carlos Soares, Director General of Environment, GEF OFP Timor-Leste
- Max Zieren, Task Manager & Regional Focal Point Asia, UN Environment

NIMURA GENETIC SOLUTIONS CO., LTD.
2-20-8, kamiosakishinagawa, Tokyo, 141-0021, JAPAN

Asia and the Pacific Office

United Nations
Environment Programme

Reference: AP/2018-083/GEF/DT/mz

May 01, 2018

Subject: Co-financing support for the GEF STAR-6 project "Establishing the National Framework and Operational Capacity for Implementing the Nagoya Protocol in Timor-Leste" (GEF project ID 9703)

Dear Ms. Kelly West,

On behalf of UN Environment, I am pleased to commit USD 100,000 in co-financing in the form of in-kind contribution to support the achievement of the objectives and outcomes of the above-mentioned GEF funded project in Timor-Leste.

Our contributions would consist of making available the lessons and tools from other UN Environment ABS related initiatives in for instance Myanmar, India, Nepal, Vietnam, Indonesia, the Caribbean and as well as some African nations. It would also involve in-kind staff contributions related to outreach and promotion of the project in our region, as well as support to the government of Timor Leste with regards advisory services in marine biodiversity conservation, as well as ABS and related legal aspects under the evolving national ABS legal framework.

This contribution as described above is intended to qualify as co-financing should the project proposal be successful.

Sincerely,

Dechen Tsering
Regional Director and Representative
Asia and the Pacific Office

Ms. Kelly West, GEF Coordinator
GEF Coordination Office
UN Environment
Nairobi, Kenya

Copy: - Joao Carlos Soares, Director General of Environment, GEF OFP Timor-Leste
- Max Zieren, Task Manager & Regional Focal Point Asia, UN Environment

United Nations Building, 2nd Floor,
Rajadamnern Nok Avenue, Bangkok 10200, Thailand
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MUSEUM AND ART GALLERY NORTHERN TERRITORY

26 June 2018

Ms Kelly West
GEF Coordinator
GEF Coordination Office
UN Environment
Nairobi, Kenya

Dear Ms West,

Letter of support for the GEF project "Establishing the National Framework and Operational Capacity for Implementing the Nagoya Protocol in Timor-Leste" (ID 9703)

The Museum and Art Gallery of the Northern Territory (MAGNT) has a long history and ongoing interest in supporting the cultural and scientific development of Timor-Leste. Particularly through working with colleagues in Timor-Leste in the exchange of research, undertaking collaborative fieldwork, conserving Timor-Leste's cultural heritage, developing exhibitions and publications, and undertaking capacity building projects.

During the crisis in Timor in 1999, MAGNT worked with colleagues in Dili to conduct the salvage programme for the collections of the Museum of Timor, saving over 500 objects. This was followed in 2003 with the delivery of a museum training programme in Dili in collaboration with UNESCO, Melbourne University and the Division of Culture and Museums, Timor Leste (DCMTL). In 2006 and 2007, MAGNT hosted delegations of staff from the DCMTL and a visit by the Director to participate in a planning process for the development of a national museum of Timor-Lester.

In 2008, the National Directorate of Culture and MAGNT collaborated to deliver the first ever international exhibition and catalogue of cultural objects since Timor-Leste gained independence: *Husi Bei Ala Timor Sira Nia Liman – From the Hands of our Ancestors.* The project provided important training and capacity building opportunities for DCMTL staff and promoted the National Directorate's efforts for the establishment of a National Museum.

MAGNT has worked with agencies from Timor-Leste and elsewhere since at least 2002 and as recently as 2018 in joint research collaborations to describe, document, and highlight the endemic, new, threatened, and alien species in Timor-Leste and surrounding waters for conservation and management, and also to discuss and plan bio-prospecting collaborations with the Timor-Leste Government. These agencies include Conservation International, National Geographic Society, US National Cancer Institute, Coral Reef Research Foundation, Australian Institute of Marine Sciences, amongst others.

Continuing this extensive history of natural and cultural heritage collaborations with Timor-Leste colleagues and others, MAGNT expresses its support for the worthy goals and objectives of the above mentioned GEF funded project.

MAGNT looks forward to discussions with organisers of the GEF project to identify possible areas of collaboration. Contributions from MAGNT are likely to be the provision of technical support and training on the collecting, cataloguing, identification, and storage of information on specimens for the inventory established under the project.

Sincerely,

Marcus Schutenko
Director, MAGNT

19 Conacher Street, The Gardens, Darwin NT 0820 | GPO Box 4646, Darwin NT 0801 | info@magnt.net.au | +61 8 8999 8264 | **www.magnt.net.au**

APPENDIX 11: ENDORSEMENT LETTER OF THE GEF NATIONAL FOCAL POINT

REPUBLIC DEMOCRATE OF TIMOR-LESTE (RDTL)
Ministry of Commerce Industry and Environment (MCIE)
DIRECTORATE GENERAL OF ENVIRONMENT
Fomento Building, Rua Don Boa Ventura, Mandarin, Dili.
Mb.: 77 32 70 62; *e-mail*: soaresjoaocarlos@ymail.com-farina_amor73@yahoo.com

Ref.No. /DGA-MCIE/V/2016 Data, 13 May 2016

To: Ms Brennan VanDyke
GEF Executive Coordinator, Deputy Director, OfO, UNEP
United Nations Avenue, Gigiri, Nairobi, Kenya
e-mail: vandyke@un.org

Subject: **Endorsement for Creating and Applying an Access and Benefit-Sharing Regime in Timor-Leste**

In my capacity as GEF Operational Focal Point for Timor-Leste I confirm that the above project proposal (a) is in accordance with my government's national priorities and our commitment to the relevant global environmental conventions; and (b) was discussed with relevant stakeholders, including the global environmental convention focal points.

I am pleased to endorse the preparation of the above project proposal with the support of the GEF Agency (ies) listed below. If approved, the proposal will be prepared and implemented by the Government Institutions and national or local executing organization. I request the GEF Agency (ies) to provide a copy of the project document before it is submitted to the GEF Secretariat for CEO endorsement.

The total financing (from GEFTF, LDCF, or SCCF) being requested for this project is US$ 1,500,000, inclusive of project preparation grant (PPG), if any, and Agency fees for project cycle management services associated with the total GEF grant. The financing requested for Timor-Leste is detailed in the table below.

Source of Funds	GEF Agency	Focal Area	Amount (in US$)			
			Project Preparation	Project	Fee	Total
GEFTF	UNEP	Biodivers	50,000	1,319,863	130,137	1,500,000
Total GEF Resources			50,000	1,319,863	130,137	1,500,000

Where the source of funding is GEF Trust Fund only (i.e. excluding LDCF and/or SCCF) and the focal area falls under the STAR model, include the following:

I consent to the utilization of Timor-Leste's allocations in GEF-6 as defined in the System for Transparent Allocation of Resources (STAR).

Sincerely yours,

João Carlos Soares
Director General of Environment,
GEF Operational Focal Point, Timor-Leste

GEF Operational Focal Point Endorsement Template - April 2015

Copy to (delete as necessary): Convention Focal Point for UNFCCC
Convention Focal Point for UNCBD
Convention Focal Point for UNCCD
Convention Focal Point for Stockholm (POPs)
Convention Focal Point for Minamata Convention

Max Zieren, UNEP-GEF regional Focal Point, ROAP, Bangkok (max.zieren@unep.org)

APPENDIX 12: PROCUREMENT PLAN

General Terms

Funds from the GEF will be disbursed through contracts or letters of agreement between the Executing Agency and individual consultants or cooperating agencies, in accordance with rules and procurement procedures for corresponding project deliveries outlined under the two Components (see Appendix 4). A detailed Procurement Plan as well as an overview of the consultants to be hired by the project using GEF resources is shown in the table below.

APPENDIX 12: PROCUREMENT PLAN - Timor-Leste ABS					
Timor-Leste ABS Project Procurement Plan					
GEF ID		**9703**			
Project title		**Establishing the National Framework and Operational Capacity for Implementing the Nagoya Protocol in Timor-Leste**			
UNEP Budget Line	**Procurement Item**	**List of Goods and Services required**	**GEFTF Budget in $**	**Year**	**Brief description of anticipated procurement process**
Sub-Contracts					
	Conservation International	Conservation International to support Outputs 1.1.2 and 2.2.2	77'500	Year 1-4	Contract based on Executing Arrangements agreed upon during Project Preparation Grant (PPG) phase. A sub-contract will be established in line with Timor-Leste Government procurement procedures and in consultation with UN Environment.
	IT Company	IT Company to set up database and ABS Clearing House Mechanism	50'000	Year 2-4	Procurement by Biodiversity Directorate. Public tender to obtain quotations from different organisations. The partner organisation will be selected based on relevant qualifications, experience and cost-effectiveness, in line with Timor-Leste Government procurement procedures and in consultation with UN Environment.
	UNTL	UNTL technical services to support Outputs 2.1.2 and 2.2.2	121'000	Year 1-4	Contract based on Executing Arrangements agreed upon during Project Preparation Grant (PPG) phase. A sub-contract will be established in line with Timor-Leste Government procurement procedures and in consultation with UN Environment.

Other Procurement Items					
	Supplies, Commodities, Materials	Outreach and awareness activities under Output 1.2.2	60'000	Year 2-4	Procurement by Biodiversity Directorate in line with Timor-Leste Government procurement procedures.
	Equipment costs	Equipment costs for Output 2.2.2. Laboratory equipment including: - *Fridge and freezer 1 x USD 5,000* - *Fume hood 1 x USD 15,000* - *Water purifier USD 2,500* - *Oven USD 10,000* - *Rotary evaporator 2 x USD 2,500* - *Laminar flow cabinet 2 x USD 2,500* - *Balance USD 1,500* - *Chromatography USD 5,000* - *Other equipment USD 7,000*	56'000	Year 2-4	Procurement by Biodiversity Directorate in line with Timor-Leste Government procurement procedures.
Consultants					
	Consultants	See details in the table below	135'000	Year 1-4	Procurement by Biodiversity Directorate. CVs of at least 3 experts will be reviewed. The consultant will be selected based on relevant qualifications, experience and availability.
		Procurement Plan Total in $	**499,500**		

Consultants to be hired for the project using GEF/LDCF/SCCF resources				
Timor-Leste ABS project				
Position Titles	***$/ Person Week****	***Estimated Person Weeks***	***Totals***	***Tasks To Be Performed***
Local				
National ABS Expert	15.0	2'000	30'000	- Support the development of the national regulatory, policy and institutional framework (activities under Output 1.1.1, 1.1.3 and 1.1.5)
Outreach and Capacity Building Expert	12.5	2'000	25'000	- Lead the development of the outreach and institutional development plan (Output 1.2.1) Lead the implementation of the outreach and training activities (Output 1.2.2 and 1.2.3)
National Expert	2.0	2'000	4'000	- Support the preparation of a bio-prospecting opportunities report (Output 2.2.3)

Independent National Legal Expert	5.0	2'000	10'000	- Provide independent advice and guidance to the communities for the development of the Community Protocols (Output 1.1.2) and during the negotiation of PIC and MAT (Output 2.2.2)
International				
International ABS Expert	15.0	4'000	60'000	- Lead the development of the national regulatory, policy and institutional framework (activities under Output 1.1.1, 1.1.3 and 1.1.5)
International Expert	1.5	4'000	6'000	- Lead the preparation of a bio-prospecting opportunities report (Output 2.2.3)
	Grand Total		**135'000**	

Principles for procurement

The Executing Agency will take the lead on the procurement of goods and services. The process of procuring goods and services will conform to generally accepted good business practices. The Executing Agency will follow its home ministry and national government accounting standards, procurement procedures, and comply with all applicable local laws and regulations.

Procurement steps

All procurement actions of items, independent of value, shall follow these five steps:

1. *Specifications:* This is the process of determining what the project needs to procure. In most cases, specifications are based on minimum required performance characteristics, not factors such as style, colour, design, etc.
2. *Competition:* Procurement is predicated on the belief that open and unrestricted competition – to the maximum extent practical – over the life of the project will result in accumulated best value. However, competition has real cost in terms of documentation preparation, staff time, etc. The determinant of what constitutes practical competition is that estimated competition costs should not outweigh anticipated best value gain.
3. *Selection:* The Executing Agency should do business with reputable vendors, i.e., known, established vendors who offer products and services that fully meet stated specifications. When competition is involved, and there are three or more offers, the Executing Agency should select the vendor who offers best value. When cost is the primary consideration, selection is straightforward: the Executing Agency awards to the lowest offered price. When other factors are involved, such as warranties, delivery time, installation, etc., then price is just one of the evaluation factors. The proven test one can apply when selecting for best value is: "if it was your personal money being used, which vendor would you select for best value?"
4. *Negotiation, Acceptance and Documentation:* Procurement actions are brought to closure by means of negotiation and/or acceptance with the selected vendor. In some cases, this can be accomplished by issuing a purchase order and having the vendor sign acceptance, or accepting a product "over the counter" and paying against an invoice. For more complex procurements, there may be a need to reach agreement on such items as payment, deliverables and delivery terms, i.e. these need to be negotiated and specified in a subcontract. In all cases, a procurement

action is closed by mutual acceptance, whether it be a purchase order, letter of agreement, subcontract, or payment of vendor invoice. All transactions, without exception, require supporting documentation such as a receipt. In small value situations when a vendor receipt is not available, this can be a pre-printed form or memo note that the Executing Agency staff member fills out, signs and submits. For large value procurement, this could consist of an entire package of documents including the specifications, the request for quotation or invitation for bids, an award memo describing the rationale for selection, the purchase contract or order, and a commercial grade receipt on the vendor's pre-printed letterhead.

5. *Thresholds:* The work input for the Executing Agency varies with the size and importance of the procurement action. This is best explained by the following threshold table:

Threshold Value	Procedures, Documentation & Responsibilities
Small value US$0 to US$2,500	*Specifications*: Employee's professional assessment; consultation with technical staff and/or management required; must be written. *Competition*: Three quotes from vendors; by telephone, email, fax, or hand-delivered. Written quotes preferred for values in excess of $500. *Selection*: Employee in consultation with technical staff and/or management for determining best value. *Negotiation, Acceptance & Documentation*: Written specifications; award memo; vendor receipt.
High-range >US$2,500	Competitive bidding process, following Timor-Leste Government procurement systems (as applicable)

Exceptions to Competition (Waiver of Competitive Bidding)

Competition is the foundation of UN Environment procurement. Strict review and approval processes, therefore, have been established to ensure that the waiver process is not abused. All requests seeking waiver of competitive bidding (i.e. for contracts exceeding US$5,000) must be submitted to the UN Environment Task Manager for final approval, following review by the Project Steering Committee (PSC). The final list of equipment will be presented, discussed and approved by UN Environment during the project Inception meeting or first PSC meeting. Submissions to UN Environment for waivers shall be reviewed against the following list of permissible reasons and the justification for its use:

Permissible Reasons	Justifications/Practical Considerations
Established prices/rates	Indicate name of regulatory body or law that controls rates or establishes prices. Attach a current printed rate schedule, if
Proprietary product or service	Explain why other sources do not have the capacity to perform adequately.
Standardization	Provide plain, simple, direct information based upon facts so that a person without technical expertise can follow the rationale.
Cooperation with other UN organizations	In alignment with an agreement entered into by another UN organization. Please provide the copy of their agreement.
Competitive bidding conducted for the same item during the last year	Provide detailed information on prices and delivery. There should be no increase in prices.
Competitive bidding conducted during the last year has not produced satisfactory results	Provide detailed summary of the previous competitive bidding process and its outcome.
Procure or lease property	Provide the prevalent market rates in that area.
Urgency	Include the following in the justification: (1) A description of the urgency (the urgency cannot be the result of slow administrative processing or a general lack of planning).; (2) An explanation of how the non-competitive purchase will meet the schedule; (3) A discussion of the adverse impact that the UN Environment would suffer if the delivery schedule were modified to permit competition.
Professional services that cannot be objectively evaluated	This relates to Research and Development Services.
Formal solicitation will not give satisfactory results	Provide detailed cost estimates.

APPENDIX 13: TRACKING TOOL

Tracking tool in Excel attached as a separate file.

APPENDIX 14: ENVIRONMENTAL SOCIAL AND ECONOMIC REVIEW NOTE

I. Project Overview

Identification	GEF Project ID: 9703 UN Environment Project ID: 01547
Project Title	Establishing the National Framework and Operational Capacity for Implementing the Nagoya Protocol in Timor-Leste
Managing Division	Ecosystems Divisions
Type/Location	National
Region	Asia Pacific
List Countries	Timor-Leste
Project Description	The objective of the project is to establish the conditions enabling sustainable access to the genetic resources of Timor-Leste, which will deliver fair and equitable benefits to its people, while protecting legal and customary ownership and traditional knowledge. The project is organised into two components, as follows. Component 1: Establishment of national legal and institutional framework on ABS, including Traditional Knowledge. Component 2: Operationalisation of the Nagoya Protocol on research and monitoring for sustainable utilisation of genetic resources.
Estimated duration of project	48 months January 2019 – December 2022
Estimated cost of the project	GEF Grant: USD 1,319,863 Co-finance: USD 4,050,000

II. Environmental Social and Economic Screening Determination

A. Summary of the Safeguard Risks Triggered

Safeguard Standard Triggered by the Project	Impact of Risk[70] (1-5)	Probability of Risk (1-5)	Significance of Risk (L, M, H)
SS 1: Biodiversity, Natural Habitat and Sustainable Management of Living Resources	2	1	L
SS 2: Resource Efficiency, Pollution Prevention and Management of Chemicals and Wastes	1	1	L
SS 3: Safety of Dams	1	1	L
SS 4: Involuntary resettlement	1	1	L
SS 5: Indigenous peoples	2	2	L
SS 6: Labour and working conditions	1	1	L
SS 7: Cultural Heritage	1	1	L
SS 8: Gender equity	2	1	L
SS 9: Economic Sustainability	1	1	L
Additional Safeguard questions for projects seeking GCF-funding (Section IV)			

B. ESE Screening Decision[71] (Refer to the UNEP ESES Framework (Chapter 2) and the UNEP's ESES Guidelines.)

Low risk [X] Moderate risk [ ] High risk [ ] Additional information required [ ]

C. Development of ESE Review Note and Screening Decision:

Prepared by: Name: Angela Joehl Cadena Date: 21 June 2018

Safeguard Advisor: Name: Date:

Project Manager: Name: Date:

D. Recommended further action from the Safeguard Advisor:

While the project is not involved in ABS execution, it will influence the future implementation of the methodology and recommendations that the project leaves behind, which concerns the safeguard risks.

[70] Refer to UNEP Environment, Social and Economic Sustainability (ESES): Implementation Guidance Note to assign values to the Impact of Risk and the Probability of Risk to determine the overall significance of Risk (Low, Moderate or High).

[71] **Low risk**: Negative impacts negligible: no further study or impact management required.
Moderate risk: Potential negative impacts, but less significant; few if any impacts irreversible; impact amenable to management using standard mitigation measures; limited environmental or social analysis may be required to develop a ESEMP. Straightforward application of good practice may be sufficient without additional study.
High risk: Potential for significant negative impacts, possibly irreversible, ESEA including a full impact assessment may be required, followed by an effective safeguard management plan.

The safeguard section of the project is quite comprehensive as some major concerns are all identified together with the actions required.

Science will meet local and national politics and diverse economic interests during the process. Managing and meeting diverse expectations can be challenging, especially for commercial use of genetic resources. The MAT and PIC should be well designed, inclusively managed and closely monitored involving the local stakeholders so that any potential concerns or conflicts can be resolved adaptively and proactively.

The project stated its commitment to involve relevant stakeholders including local public. Their ethnic, gender, age, religion, regional diversities or other socio-cultural dimensions should be considered in selecting the representatives for the project and also consider the best ways to collect their views and engage them through appropriate communication modalities.

III. ESES Principle and Safeguard checklist

(Section III and IV should be retained in UNEP)

Precautionary Approach
The project will adopt precautionary measures even if some cause and effect relationships are not fully established scientifically and there is risk of causing harm to the people or to the environment.
Human Rights Principle
The project will, as far as is possible, include any potentially affected stakeholders - particularly vulnerable and marginalized groups - in the decision-making processes that may affect them.
The project will respond to any significant concerns or disputes raised during the stakeholder engagement process.
The project will try to avoid inequitable or discriminatory negative impacts on the quality of, and access to, resources or basic services used by affected populations, particularly people living in poverty or marginalized or excluded individuals or groups.[72]

Screening checklist	Y/N/ Maybe	Comment
Safeguard Standard 1: Biodiversity, Natural Habitat and Sustainable Management of Living Resources		
Will the proposed project support directly or indirectly any activities that significantly convert or degrade biodiversity and habitat including modified habitat, natural habitat and critical natural habitat?	N	The project will ensure sustainable harvesting practices for any sampling/surveying activities.
Will the proposed project likely convert or degrade habitats that are legally protected?	N	See comment above.
Will the proposed project likely convert or degrade habitats that are officially proposed for protection? (e.g.; National Park, Nature Conservancy, Indigenous Community Conserved Area, (ICCA); etc.)	N	See comment above.
Will the proposed project likely convert or degrade habitats that are identified by authoritative sources for their high conservation and biodiversity value?	N	See comment above.
Will the proposed project likely convert or degrade habitats that are recognized, including by authoritative sources and/or the national and local government entity, as protected and conserved by traditional local communities?	N	See comment above.
Will the proposed project approach possibly not be legally permitted or inconsistent with any officially recognized management plans for the area?	N	The project will involve collaboration with the relevant government agencies in order to ensure any activities are legally permitted.

[72] Prohibited grounds of discrimination include race, ethnicity, gender, age, language, disability, sexual orientation, religion, political or other opinion, national or social or geographical origin, property, birth or other status including as an indigenous person or as a member of a minority. References to "women and men" or similar is understood to include women and men, boys and girls, and other groups discriminated against based on their gender identities, such as transgender people and transsexuals.

Screening checklist	Y/N/ Maybe	Comment
Will the proposed project activities result in soils deterioration and land degradation?	N	The project will ensure sustainable harvesting practices for any sampling/surveying activities.
Will the proposed project interventions cause any changes to the quality or quantity of water in rivers, ponds, lakes or other wetlands?	N	See comment above.
Will the proposed project possibly introduces or utilize any invasive alien species of flora and fauna, whether accidental or intentional?	N	See comment above.
Safeguard Standard 2: Resource Efficiency, Pollution Prevention and Management of Chemicals and Wastes		
Will the proposed project likely result in the significant release of pollutants to air, water or soil?	N	Not anticipated. The project will ensure the safe disposal of chemical waste from laboratory activities.
Will the proposed project likely consume or cause significant consumption of water, energy or other resources through its own footprint or through the boundary of influence of the activity?	N	Not anticipated.
Will the proposed project likely cause significant generation of Green House Gas (GHG) emissions during and/or after the project?	N	Not anticipated.
Will the proposed project likely generate wastes, including hazardous waste that cannot be reused, recycled or disposed in an environmentally sound and safe manner	N	Not anticipated.
Will the proposed project use, cause the use of, or manage the use of, storage and disposal of hazardous chemicals, including pesticides?	N	No.
Will the proposed project involve the manufacturing, trade, release and/or use of hazardous materials subject to international action bans or phase-outs, such as DDT, PCBs and other chemicals listed in international conventions such as the Stockholm Convention on Persistent Organic Pollutants or the Montreal Protocol?	N	No.
Will the proposed project require the procurement of chemical pesticides that is not a component of integrated pest management (IPM)[73] or integrated vector management (IVM)[74] approaches?	N	No.
Will the proposed project require inclusion of chemical pesticides that are included in IPM or IVM but high in human toxicity?	N	No.

[73] "Integrated Pest Management (IPM) means the careful consideration of all available pest control techniques and subsequent integration of appropriate measures that discourage the development of pest populations and keep pesticides and other interventions to levels that are economically justified and reduce or minimize risks to human health and the environment. IPM emphasizes the growth of a healthy crop with the least possible disruption to agroecosystems and encourages natural pest control mechanisms http://www.fao.org/agriculture/crops/thematic-sitemap/theme/pests/ipm/en/

[74] "IVM is a rational decision-making process for the optimal use of resources for vector control. The approach seeks to improve the efficacy, cost-effectiveness, ecological soundness and sustainability of disease-vector control. The ultimate goal is to prevent the transmission of vector-borne diseases such as malaria, dengue, Japanese encephalitis, leishmaniasis, schistosomiasis and Chagas disease." (http://www.who.int/neglected_diseases/vector_ecology/ivm_concept/en/)

Screening checklist	Y/N/ Maybe	Comment
Will the proposed project have difficulty in abiding to FAO's International Code of Conduct[75] in terms of handling, storage, application and disposal of pesticides?	N	No.
Will the proposed project potentially expose the public to hazardous materials and substances and pose potentially serious risk to human health and the environment?	N	No.
Safeguard Standard 3: Safety of Dams		
Will the proposed project involve constructing a new dam(s)?	N	No.
Will the proposed project involve rehabilitating an existing dam(s)?	N	No.
Will the proposed project activities involve dam safety operations?	N	No.
Safeguard Standard 4: Involuntary resettlement		
Will the proposed project likely involve full or partial physical displacement or relocation of people?	N	No.
Will the proposed project involve involuntary restrictions on land use that deny a community the use of resources to which they have traditional or recognizable use rights?	N	No. The project is designed to ensure Prior Informed Consent (PIC) and respect community ownership over genetic resources and associated traditional knowledge.
Will the proposed project likely cause restrictions on access to land or use of resources that are sources of livelihood?	N	Not anticipated.
Will the proposed project likely cause or involve temporary/permanent loss of land?	N	No.
Will the proposed project likely cause or involve economic displacements affecting their crops, businesses, income generation sources and assets?	N	No.
Will the proposed project likely cause or involve forced eviction?	N	No.
Will the proposed project likely affect land tenure arrangements, including communal and/or customary/traditional land tenure patterns negatively?	N	No.
Safeguard Standard 5: Indigenous peoples[76]		
Will indigenous peoples be present in the proposed project area or area of influence?	Y	The field component of this project is limited to surveying/sampling activities. The project is designed to ensure Prior Informed Consent (PIC) and respect community ownership over genetic resources and associated traditional knowledge.
Will the proposed project be located on lands and territories claimed by indigenous peoples?	Y	See comment above.
Will the proposed project likely affect livelihoods of indigenous peoples negatively through affecting the rights, lands and territories claimed by them?	N	Not anticipated.

[75] Find more information from http://www.fao.org/fileadmin/templates/agphome/documents/Pests_Pesticides/Code/CODE_2014Sep_ENG.pdf
[76] Refer to the Toolkit for the application of the UNEP Indigenous Peoples Policy Guidance for further information.

Screening checklist	Y/N/ Maybe	Comment
Will the proposed project involve the utilization and/or commercial development of natural resources on lands and territories claimed by indigenous peoples?	N	Any utilisation of genetic resources will be based on Mutually Agreed Terms (MAT) to ensure fair and equitable sharing of benefits.
Will the project negatively affect the development priorities of indigenous peoples defined by them?	N	The project will involve the development of Community Protocols to ensure that local indigenous practices, beliefs and customary law are followed to guide access to traditional knowledge associated with genetic resources.
Will the project potentially affect the traditional livelihoods, physical and cultural survival of indigenous peoples?	N	Not anticipated.
Will the project potentially affect the Cultural Heritage of indigenous peoples, including through the commercialization or use of their traditional knowledge and practices?	N	The project is designed to ensure Prior Informed Consent (PIC) and respect community ownership over genetic resources and associated traditional knowledge.
Safeguard Standard 6: Labour and working conditions		
Will the proposed project involve the use of forced labour and child labour?	N	No.
Will the proposed project cause the increase of local or regional un-employment?	N	No.
Safeguard Standard 7: Cultural Heritage		
Will the proposed project potentially have negative impact on objects with historical, cultural, artistic, traditional or religious values and archaeological sites that are internationally recognized or legally protected?	N	Not anticipated.
Will the proposed project rely on or profit from tangible cultural heritage (e.g., tourism)?	N	No.
Will the proposed project involve land clearing or excavation with the possibility of encountering previously undetected tangible cultural heritage?	N	No.
Will the proposed project involve in land clearing or excavation?	N	No.
Safeguard Standard 8: Gender equity		
Will the proposed project likely have inequitable negative impacts on gender equality and/or the situation of women and girls?	N	The project will ensure that any Community Protocols and model agreements take into account the specific needs and priorities of women and that any benefits are available to both women and men.
Will the proposed project potentially discriminate against women or other groups based on gender, especially regarding participation in the design and implementation or access to opportunities and benefits?	N	See comment above. The project will ensure adequate representation of (and inputs from) women, local community representatives and youth, and will hold separate consultations, as needed, with different interest groups including women, local community representatives, and youth.
Will the proposed project have impacts that could negatively affect women's and men's ability to use, develop and protect natural resources, taking into account different roles and positions of women and men in accessing environmental goods and services?	N	Not anticipated.

Screening checklist	Y/N/ Maybe	Comment
Safeguard Standard 9: Economic Sustainability		
Will the proposed project likely bring immediate or short-term net gain to the local communities or countries at the risk of generating long-term economic burden (e.g., agriculture for food vs. biofuel; mangrove vs. commercial shrimp farm in terms of fishing, forest products and protection, etc.)?	N	Not anticipated.
Will the proposed project likely bring unequal economic benefits to a limited subset of the target group?	N	Not anticipated.

I. Additional Safeguard Questions for Projects seeking GCF-funding

Not applicable.

Community Health, Safety, and Security			
Will there be potential risks and negative impacts to the health and safety of the Affected Communities during the project life-cycle?			
Will the proposed project involve design, construction, operation and decommissioning of the structural elements such as new buildings or structures?			
Will the proposed project involve constructing new buildings or structures that will be accessed by public?			
Will the proposed project possibly cause direct or indirect health-related risks and impacts to the Affected Communities due to the diminution or degradation of natural resources, and ecosystem services?			
Will the proposed project activities potentially cause community exposure to health issues such as water-born, water-based, water-related, vector-borne diseases, and communicable diseases?			
In case of an emergency event, will the project team, including partners, have the capacity to respond together with relevant local and national authorities?			
Will the proposed project need to retain workers to provide security to safeguard its personnel and property?			
Labour and Supply Chain			
Will UNEP or the implementing/executing partner(s) involve suppliers of goods and services who may have high risk of significant safety issues related to their own workers?			

APPENDIX 15: SOCIO-ECONOMIC ANALYSIS

See separate file.