Annex 7

Stakeholder Engagement Plan

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Enhancing Early Warning Systems to build greater resilience to hydro-meteorological hazards in Timor-Leste

Prepared by Pacific Science Solutions

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Introduction

Timor-Leste is a Least Developed Country (LDC), a Small Island Developing State (SIDS) and a post-conflict country whose infrastructure and governmental systems have been devastated by a 25-year war of independence. It is highly vulnerable to the effects of climate change, and the World Risk Index 2019 ranks it the country 15th most at risk from natural disasters, because of its location, geography and very limited capacity to prepare for and recover from climate impacts.[1]

It is increasingly under threat from climate change challenges common to tropical SIDS—rising mean temperatures, warming and rising seas, ocean acidification[2] and deoxygenation[3], less predictable and more extreme rainfall, more intense tropical cyclones, flooding and prolonged droughts. About 70% of the Timorese (840,000 people) live in rural areas (UNESCAP 2016) and the agricultural sector provides subsistence to an estimated four-fifths of the country's total population (FAO 2011).

Coastal populations are affected by storm surges, river flooding, saltwater intrusion into agricultural land and drought. Villages at higher elevations are affected by changes to the intensity and timing of rainfall, landslides precipitated by heavy rain on over-cleared, deforested slopes, and increasing drought. Climate-related hazards—particularly drought, flooding and landslides—are affecting Timor-Leste's development by disrupting transport and services, destroying public and private infrastructure, degrading ecosystems and exacerbating already severe food insecurity.[4] Without external inputs, climate change will hamper the country's recovery and future development.

Timor-Leste

Timor-Leste has a challenging investment environment. As well as its vulnerability to natural disasters, it is still recovering from political upheaval, and it struggles to develop its private sector. Oil and gas contribute about 90% of Timor-Leste's total budget revenue and is a finite resource. Oil is processed in Australia and has not created employment in Timor-Leste. The rural population has been decreasing steadily, but Timor-Leste is still a predominantly rural country in comparison to the world's average of 44.7%. Subsistence farming is the main activity, and few have access to financial services.

One of the world's newest countries (independent since 2002), Timor-Leste is rebuilding public infrastructure—including roads, ports and airports, water and sanitation systems, power and communication grids, and government facilities—and institutional frameworks. It is vital that these investments are informed by high quality climate change information and science-based advice on planning adaptation to the longer term climate change impacts. Many of Timor-Leste's subsistence farmers live precariously, at risk of starvation if a crop fails or is destroyed by heavy rain or drought. As the climate becomes more chaotic and unpredictable, its government and people need reliable, timely and understandable information and early warnings on local weather, climate and ocean environments.

Timor-Leste starts from a low institutional base and lacks the climate observation infrastructure and human resources needed to generate robust climate data and information and multi-hazard early warning services (MHEWS) covering the whole country. The Government's capacity to deliver

[1] https://reliefweb.int/sites/reliefweb.int/files/resources/WorldRiskReport-2019_Online_english.pdf
[2] "[T]he medium (RCP4.5) scenario carbon-climate feedbacks showed the greatest acidification response, doubling the extent of undersaturation and subsequently halving the area that could sustain coral reefs by 2100.", Matear,R and Lenton, A: https://www.us-ocb.org/sensitivity-of-future-ocean-acidification-to-carbon-climate-feedbacks/
[3] IPCC, 2019, Special Report on the Ocean and Cryosphere in a Changing Climate
[4] Infant and maternal mortality rates are very high by global standards and more than half the children under 5 are stunted by malnutrition and under-nutrition: https://www.usaid.gov/sites/default/files/documents/1864/Timor Leste-Nutrition-Profile-Mar2018-508.pdf

climate services to everyone who needs them is also very limited. Barriers to effective climate and ocean information services and MHEWS include:

- Lack of legislative, regulatory and policy frameworks for climate services and disaster risk management;
- Inadequate observation networks and limited sector-specific climate and ocean information;
- Limited communication and use of climate hazard and risk information, including related health risks; and
- Limited capacity and funding to prepare for and manage climate risks.

Since its independence, Timor-Leste has established a government-funded meteorological service—the National Directorate of Meteorology and Geophysics (DNMG). However, no capacity currently exists for the analysis of data, the generation of targeted information products or the provision of decision support tools to mainstream climate knowledge into resilient development planning and investment decisions. Investment decisions made without adequate information on current and future climate impacts risk both waste and maladaptation.[5]

Proposed GCF Project

"While Timor-Leste has a medium exposure to hazards, its lack of coping and adaptive capacity and strategies makes it the 15th most disaster-prone country in the world.[6] About 80% of Timorese have experienced the effects of a natural disaster in their lifetime, and climate-related hazards have caused over 80% of all disaster-related deaths since 1992."[7] Meteorological services in Timor-Leste are dependent on support from external agencies such as the Australian Bureau of Meteorology (BoM), the Indonesian Meteorological Service (BMKG), the Thailand Meteorological Service (which supports development of the Regional Integrated Multi Hazard Early Warning System—RIMES) and the Centre for International Agricultural Research (CIAR). This Project will strengthen Timor-Leste's ability to forecast and increase resilience to climate change through its own meteorological service.

The Project has four Results, which will contribute to the enhancement of the country's early warning systems and build capacity and resilience in combating the increasingly frequent hydro-meteorological hazards it faces.

Each of the Results comprises a set of Activities and Sub-Activities, designed to remove specific barriers to achieving increased resilience to climate change threats. The four Results are interlinked and are essential to Timor-Leste's capacity to prepare for and respond to climate related disasters. The sub-activities will build climate change resilience through:

- Institutionalising and mainstreaming climate and ocean information and MHEWS into sectoral and community level planning;
- Ensuring decision making and preparedness actions are climate risk-informed;
- Expanding the range, quality, and volume of reliable data available to Timor-Leste;

[5] Enhancing Early Warning Systems to build greater resilience to hydro-meteorological hazards in Timor-Leste, GCF Funding Proposal
[6] https://reliefweb.int/sites/reliefweb.int/files/resources/WorldRiskReport-2019_Online_english.pdf; UNDP, Timor Leste: Stay Connected – Reducing Climate Risks, Building the Future, 2016.
[7] http://www.desinventar.net/DesInventar/profiletab.jsp?countrycode=etm&continue=y

- Strengthening the capacities of the DNMG and other agencies to analyse and apply their data; and
- Improving the communication of information so that it reaches everyone who needs it.[8]

Timor-Leste's existing capacity is at differing levels for the four Results and this is reflected in the implementation schedule. The Project aims to progress all elements of an effective climate information service and MHEWS concurrently, ensuring that barriers to one element do not delay or undermine progress in others.

Result 1 – Strengthened delivery model and legislation for climate information and multi-hazard early warning services

This Result will enable Timor-Leste to develop institutional and policy frameworks for strengthened climate information services. The Project will support DNMG to create coordination mechanisms with key climate-sensitive sectors, to manage the integration of climate considerations into their decision making. A comprehensive national climate services framework will structure the science–policy interface, so that sector agencies have ready access to sound scientific research and useable information.

Responsibility for provision of climate and weather services and roles in disaster warning will be negotiated, clarified and formalised in preparation for the development of a Meteorology Act and a National Meteorology Strategy. The Project will ensure all stakeholders are supported in contributing to these outcomes.

During the course of the Project, DNMG will initiate consideration of a financial framework to ensure that the value of its contribution is reflected in the allocation of public funding for climate data collection, analysis and adaptation planning. With the Project's support, DNMG will assess options for other revenue sources, as it begins to develop tailored and potentially marketable information products.

Over the Project's five years, the outcome will be increased awareness, understanding and use of the DNMG's information and advice by agencies responsible for key climate sensitive sectors, particularly the GFCS priority areas. Moreover, DNMG staff will gain cumulative experience in communicating with non-scientists to achieve practical outcomes and will begin to establish a sustainable financial base.

This Result will also instigate a best practice approach to data governance, initially for climate data, by strengthening the DNMG's climate data management system with the support of RIMES. It will support Timor-Leste's Statistics Directorate in using climate data and information with data from other sectors in order to mainstream climate considerations into the work of those sectors.

Work in this Result will complement focused training on disaster risk management to be undertaken by DNMG staff through the GCF UNDP Project, *Safeguarding Rural Communities*. The two projects will collaborate to ensure training and other inputs do not over-burden the DNMG and are mutually reinforcing.

[8] Enhancing Early Warning Systems to build greater resilience to hydro-meteorological hazards in Timor-Leste, GCF Funding Proposal

Result 2 – Strengthened observations, monitoring, analysis and forecasting of climate and its impacts

This Result will strengthen the technical capacity and modernise Timor-Leste's national meteorological service (DNMG), enabling it to collect higher quality data at higher resolution and from a wider geographical range, including its oceans, and to use the extra data. This will be achieved through the installation of new and upgraded infrastructure and equipment to extend the coverage of weather, climate and ocean observations; through training and support for observations, monitoring, modelling and prediction; and through training in maintenance.

The Project will upgrade and expand the surface-based observations and monitoring network in Timor-Leste to enable compliance with the WMO Global Basic Observing Network (GBON), which represents a new approach for the international exchange of the most essential surface-based observational data and will facilitate access to 24/7 global observations as a global public good.[9] Installation and capacity building for weather radar observations will further enhance extreme weather monitoring and early warning systems, and support validation of Numerical Weather Prediction (NWP) forecasts.

The establishment of a national Forecasting Centre will provide the three critical elements of telecommunications, data management and forecasting – supported by technical training and capacity building to ensure that DNMG has the ability to translate weather, climate and ocean observations into impact-based forecasts and value-added products and services. The Project will also build national capacity to implement innovative and cost saving technologies and practices, such as the deployment of Internet of Things (IoT) technology for climate services applications.

One of the key activities in the Project will be to establish climate services for health. There is an increasing demand for relevant, timely and usable information about weather and climate variability, change, risks and impacts to enable decision-makers – from public health officials to individual citizens – to take appropriate action to keep people safe and healthy. The Project will address this critical need through several interventions, including institutional strengthening through a national Climate and Health Working Group, establishment of a hybrid ambient air quality monitoring system, air pollution forecasting and health impact advisory, and the delivery of tailored forecasting and decision-support systems for the health sector.

Result 3 – Improved dissemination and communication of risk information and early warning

This Result focuses on the targeted dissemination and communication of climate risk information and early warnings as a key element of a people-centred impact-based Multi-hazard Early Warning System (MHEWS). The Project will build capacity for the delivery of clear messages containing straightforward, practical and actionable information, which are critical to enable appropriate preparedness and response actions that can safeguard lives and livelihoods.[10]

The Project will convene a regular working group with government agencies involved in disaster management, national and international NGOs and CBOs and community representatives to maximise the coordination of their work, generate consistency in messages, improve technical

[9] SOFF, 2020. The value of Surface-Based Meteorological Observation Data: Costs and benefits of the Global Basic Observing Network

[10] WMO, 2018. Multi-hazard Early Warning Systems: A Checklist

capability and ensure the effective delivery of EWS. Socially inclusive and gender-responsive localised communication strategies will be co-developed in collaboration with community stakeholders to facilitate that early warning communications are tailored to the differential vulnerabilities and needs of specific population groups. In addition, the Project will work with Timor-Leste Red Cross Society (CVTL) to establish community-based early warning systems.

Furthermore, the Project will work with agriculture extension officers, so that the officers clearly understand the climate data and its implications and can direct the design of tailored information for the farmers they advise.

Result 4 – Enhanced climate risk management capacity

Result 4 focuses on capacity building to prepare for climate risks and hazards and the introduction of Forecast-based Financing (FbF) – also known as Early Warning Early Action (EWEA)[11] – an innovative mechanism whereby early actions at community and government level are pre-planned based on in-depth forecast and risk analysis, and resources are allocated automatically when a specific threshold is reached. FbF/EWEA been shown to minimise losses and damages caused by climate-related hazards and reduce the need for humanitarian assistance in their aftermath.[12]

The development and operationalisation of disaster preparedness measures, including community-based disaster risk reduction plans, and targeted public awareness and education campaigns will enable the institutions and people of Timor-Leste to act early when warnings are received, facilitated by enhanced risk education. Particularly in agriculture, developing capacity for FbF/EWEA will be critical in the longer term for the sector to accelerate the urgently required actions to manage climate risks and increase resilience to long-term climate change, resulting in enhanced food security, improved nutrition and protection of vulnerable farmers from poverty.

The proposed GCF Project is fully aligned with national government priorities and regional strategies. It addresses key concerns about adaptation to climate change in Timor-Leste and builds on lessons learned and best practices for provision of climate information services.

Roles of stakeholders

The Project will adopt a broad multi-stakeholder approach and bring on board different ministries, agencies, educational institutions, NGOs, private sector actors, communities and others, representing both producers and users of climate information and early warning products. The National Climate Outlook Forum will be a key platform for these interactions. Multiple stakeholders will then have interests in the continuance of the Project's outputs and outcomes. Capacity development activities and awareness raising will enhance the capacity of all stakeholders to use climate information and early warnings effectively to reduce the impacts of climate change. The public outreach and demonstration outcomes will

[11] Forecast-based Financing (FbF) and Early Warning Early Action (EWEA) are synonymous. Both terms have become popular in recent years on account of the various agencies who frequently use them. While there has been a shift towards streamlining this language, an agreement is yet to be reached. As such, the Funding Proposal will refer to both terms according to that used by the relevant technical partner.

[12] WFP, 2018. Forecast-based Financing Factsheet. Available from: https://www.wfp.org/publications/forecast-based-financing-factsheet

be documented, and benefits quantified, to generate evidence to gauge the impacts of the Project, and to convince policy- and decision-makers to invest in its long-term maintenance.

The stakeholder engagement plan (SEP) for Timor-Leste has been prepared and will be applied to all components of the proposed Project to ensure the continuing participation of stakeholders throughout its implementation. Use of the plan will ensure appropriate consultation and coordination with all the stakeholders as Project activities are delivered, and the inclusion of their specific interests and concerns. The SEP provides guidelines for stakeholder engagement and all third parties are expected to follow these guidelines while executing their activities. The SEP is a flexible plan and will be revised and updated by the Project Management Unit if necessary, during the Project's lifetime.

Regulations and requirements

All equipment will be sited on Government-owned land with the approval of the Government of Timor-Leste.

Previous stakeholder engagement

Stakeholder engagement was previously undertaken by the World Meteorological Organization (WMO) to support the development of a funding proposal on enhancing early warning systems (EWS) to build resilience to hydrometeorological hazards in five Pacific Small Island Developing States (SIDS), including Timor-Leste. The initial programme was not realised; however, outcomes of the stakeholder consultations informed the development of the proposed Project.

The objective of the WMO consultations was to get a clear understanding of EWS stakeholders and capacity gaps, scope potential activities and assess countries' ability to operate and sustain the project infrastructure. The purpose was also to ensure ownership of the proposed project by countries and agencies, achieved through collaboration with national, provincial and local community, sector and regional stakeholders, development partners, private sectors, NGOs and vulnerable groups. The consultations looked at gender implications and ways to integrate gender perspective into EWS.

The consultations took place in-country in November 2017. The consultations consisted of series of bilateral and group meetings and a national workshop. These were conducted by WMO, DNMG and the NDA, with support from consultants. The consultation process is described below.

→ First step: Identification of key stakeholders engaged in the generation, distribution and use of advice and warnings about hydrometeorological hazards

The following stakeholders were consulted or involved in the consultation process:

- Government stakeholders: Ministry of Development and Institutional Reform, Vice Minister of Development for Transport and Telecommunication, Directorate of Meteorological Services, Directorate of Telecommunications, Vice Minister of Development for Housing, Spatial Planning and Environment, National Directorate of Climate Change and Directorate for Biodiversity, Ministry of Social

Solidarity, Directorate Disaster Management Services, Ministry of Agriculture and Fisheries, National Directorate for Research and Agricultural Information System, Ministry of Health;

- Community level stakeholders: World Vision, Oxfam Timor-Leste.

→ Second step: Bilateral and group meetings and national workshops with identified stakeholders

This step consisted of a series of meetings and workshops aimed at identifying priority hazards, discussing the status of EWSs operated by countries and capacity gaps and defining priorities for strengthening EWSs. In parallel to this activity, an advocacy work was carried out in order to enhance awareness about EWSs as well as engagement of main stakeholders, in particular national authorities. Surveys and consultations relating to gender issues were also undertaken at this stage. The feedback from these meetings and workshops is captured in this Stakeholder Engagement Plan and the Feasibility Study (Annex 2). The findings from the gender consultations are summarised in the Gender Assessment, which will inform development of the Gender Action Plan (Annex 8).

Notes from the consultation workshop

Date / Time: 23 November 2017, 09:00 – 16:30

Venue: Maubara Meeting Room, Level 5, Timor Plaza

The workshop was delivered according to the Program of Agenda sent to participants. Details of workshop participants is provided in Table 1 below. The workshop was opened by Mr Joao Soares (Director General for the Environment) followed by an introduction by Mr Augusto Pinto (Director of the National Directorate for Climate Change and GCF NDA for Timor-Leste).

Table 1: List of workshop participants

REPÚBLICA DEMOCRÁTICA DE TIMOR-LESTE
Gabinete do Vice Ministro do Desenvolvimento Para Habitação, Ordenamento e Ambiente
Direção Geral do Ambiente
Direção Nacional Para Alteração Climática
Edifício do Fomento, Rua D. Boaventura, Mandarin, Díli.

Workshop Early Warning System

Date: 23/11/ 2017

No	Name	Institution	Position	Mobile Phone	Email Address	Signature
1.	JOSÉ VIEGAS	JICA CB-NRM	Secretary	7669 4060	[illegible]	[signature]
2.	MARIANO A. LOPES	MDS - DNPC	Chief of Department	77123759	lopesmarianoanar317@gmail.com	[signature]
3.	Juviana Eny Jeronimo	DNGRA	Staff Strategy & policy	73645947	Juviana.neto@mop.gov.tl	[signature]
4.	Mirko Gaunz	GIZ -GCCA	Prog. Coord GCCA	77611962	mirko.gaunz@giz.de	[signature]
5	Julio Sequeira	AMBEINTE	TK [illegible]	78122564	sequeira@[illegible]	[signature]
6.	Francesco [illegible]	Ambiente	DESAM	[illegible]	[illegible]	[signature]
7	Eugenio Soares	IPG-Risku geologia	Director	77264472	esoares@ipg.tl	[signature]
8	Luis teofilo da Costa	IPG - Geohazard	Geologist	77132219	lcosta@ipg.tl	[signature]
9	Severino D.C. Oliveira	DNGRD - NDOC	Staff/F.P. EWS	77007717		[signature]
10	MICHAEL COUGHLAN	GEC/WMO TEAM	CONSULTANT	+61 419411 225	m.coughlan@bigpond.com	[signature]

11	Annabelle GIORGETTI	ENVECO	ECONOMIST	+64(0) 21 267 6190	annabelle@enveco.co.nz	
12	Kristina Fidali	ARKMOON	CONSULTANT	+677(7251383	FAkristina@gmail.com	
13	Solita Noronha Pereira		INTERPRETER	+61 82 653 9170	solytapereira@gmail.com	
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16	Adão S. Barbosa	WVTL	Director cab	77271136	adaos@yahoo.com	
17	Elda da Costa	DNAC	Proff staff.	76256687	eldadacostaangelferres@yahoo.com	
18	Isabel Pereira	GIZ - GCCA	Adviser	77801923	isabel.pereira@giz.de	
19	Clarisse Trindade	GCF	National Consultant	7195 1999	clansse.trindade@undp.org	
20	Domingos Mesquita	DNAC	staf	77381717	domingosmesquita70@gmail.com	
21	Zélia A. Maria	DNAC	staff	77308535	zeliaamaria@yahoo.com	
22	Lourenco Cotrim Xavier	FAO	CCDRM specialist	77026002	lourencoxavier@gmail.com	
23	Octavio Pinto	MdS/DNSP/DVSSA	Of. Kontrola Vektor	77656294	octavio.pint@gmail.com	
24	Justina de J. Amaral	DNMV - MAE	Diretora	77304105	amaral.justina@yahoo.com	
25	AUGUSTA X. MARTINS	DNMG	Staf	77053118		
26	CARLA MARIA FREITAS	DNMG	STAF	77019944		
27	FLAVIANA FERNANDES	Chief of Department	DNMG	73852525		

28	Ana Maria de carvalho	NPC - DARDC/Undp.	Undp	77800370		
29	Terencio Fernandes Moniz	DNME	Director	77230218	t.fmoniz.moniz@gmail.com	
30	Marcal Gusmao	N C	N C	77894747	marcalgusmao@gmail.com	
31	Augusto M. Pinto	NDCC - DGE	Director	77811530	tlclimatechange@gmail.com	

This was followed by presentations on i) Current EWS in Timor-Leste and gaps by Terencio Fernandes Moniz, Director of the National Directorate for Meteorology and Geophysics; ii) Identification of the country's hazard project priorities and components; iii) Economic benefits of EWSs; and iv) Gender implications for EWSs. These presentations culminated in the identification of three priority hazards for Timor-Leste – flooding, landslide and drought. The participants were divided into three groups to work on each of the identified hazards.

Table 2: Notes from group discussions on the identified priority hazards

EWS Component	Landslide	Flood	Drought
Risk knowledge	• Centralise database and data sharing • Lack of research, funding and update – capacity building, funding for research activities, building code	• Factors contributing to vulnerability include economic, space, design, understanding of culture and gender, drainage system, sedimentation, rainfall, topography, frequency, affected numbers • There are links (www.drm.tl) on big rivers in Timor-Leste • Integrated information systems	• Ministry of Social Solidarity: Disaster Risk Management Directorate, National Disaster Operation Centre (www.tldd.mss.gov.tl) • National Directorate for Research, Statistics and ALGIS, Agrometeorology and statistics department – www.agromet.org – a monthly bulletin • Ministry of Development and Institutional Reform: National Directorate for Water Resources Management • Development partners: GIZ-GCCA, Camoes, SAPIP, World Bank, FAO-NIEWS project, UNDP-Dili-Ainaro Corridor (DARC) and mangrove project, etc. / Ministry of State Administration
Monitoring and warning services	• Lack of equipment and resources – equipment includes advanced and reliable technology to generate accurate data and information • New equipment requires training of users • Lack of coordination at national and municipal level	• National Directorate for Meteorology and Geophysics: human resources and infrastructure • Ministry of Agriculture: Integration of agromet, hydrology for early warning system • DNCQA: DRMIS system • Local authority: scientific research?	

Dissemination and communication	• Limited channels and means – innovative and efficient means of dissemination • Information is mostly based on local knowledge • Limited coverage / mostly at national level – how to expand coverage to remote areas?	• Portal, text message, social media, MoU for communication • Communication tools (media); Rural community does not yet understand what EWS is • Government: MSS, MAF, MA, MDS, MOPC • NGO local	• Dissemination through official web page • Radio television (RTTL): Community radio station • Through focal point / local authority • DNAC: V &A, CVTL, IPG
Response capabilities	• Delayed response / warning • Lack of instruments and equipment for warning • Lack of appropriate and trained human resources • Train local authorities on how to respond	• Government and partners (national / international) • Timor-Leste does not have capacity on flooding but does for other disasters • There is local capacity, but it needs to be strengthened and modernized • Not adequate yet but requires awareness raising	• Kosantil (National Directorate for Food Security) • DNAC/NDCC – V & A (Climate change, drought, etc.) • Food security and humanitarian support • CVTL

Bilateral meetings and high-level consultations

Following the workshop, meetings were held with the National Directorate for Climate Change, National Directorate for Disaster Risk Management, Japan International Cooperation Agency and the Food and Agriculture Organization. People met include: (i) Mr Augusto Pinto, Director, Directorate for Climate Change; (ii) Mr Agostino Cosme Belo, Director, Ministry of Social Solidarity; (iii) Chiaki Shiga, JICA, Timor-Leste; and (iv) Lourenco Xavier of the FAO Timor-Leste.

These consultations confirmed that floods, landslides and droughts are priority hazards for Timor-Leste. EWSs need to be strengthened to allow communities to prepare for and respond to these hydrological and meteorological hazards. This is more effective compared to developing drainage systems to protect communities from flooding. To make this happen, the following issues need to be addressed:

- Infrastructure, technology and systems strengthening;
- Legislation review;
- Human capacity building;
- Improved dissemination and communication of warnings;
- Community response capacity building;
- EWS management and maintenance;
- Training for the technical staff to increase their capacity in analyzing and interpreting data related to the hydrometeorology hazards and disseminating information to communities in disaster prone areas.

High-level meeting

An advocacy meeting was held with the H.E. Eng. Inacio Freitas Moreira Vice Minister for Transportation and Communication Development, Ministry of Development and Institutional Reform on 24 November 2017 at 16:00 in the office of the Vice Minister.

Participants: Director Terencio F. Moniz, Mr Michael Coughlan, Mrs Annabelle Giorgetti, Mrs Flaviana Fernandes Pinto (Head of the Meteorology and Climate Department) and Marcal Gusmao (national consultant).

The meeting with the Vice Minister of Eng. Inacio Freitas Moreira was first introduced by the Director of Meteorology and Geophysics, Mr. Terencio Fernando Moniz. Ministers' views/messages:

- Meteorology is an important sector, not only in Timor-Leste;
- In Timor-Leste however, there is lack of human resources, infrastructure and legislation that need to be addressed in the project;
- He indicated that Timor-Leste is committed to implement this project and he appointed Mrs Flaviana and Dr Terencio to support the preparation activities.

In-country fieldwork for the proposed Project

Once the Concept Note was endorsed by the NDA and approved for further development by the GCF, UNEP engaged consultants to undertake the fieldwork required for a Feasibility Study and the development of a Funding Proposal.

Pacific Science Solutions hired an in-country Stakeholder Engagement Specialist (SES) to lead the stakeholder engagement in Timor-Leste. The SES worked in-country from 9 September 2019 to 14 December 2019 and used his wide network within Timor-Leste's Government and NGOs to arrange meetings with their representatives. Stakeholders were invited to share their knowledge and ideas and provide detailed input on potential interventions and activities for Timor-Leste's GCF project.

The report following summarises the priority issues arising from face-to-face meetings with stakeholders. The SES met about two dozen representatives from multiple departments within Timor-Leste ministries and departments, including the Meteorological Service, Secretary of State for the Environment, the National Directorate Meteorology and Geophysics, the National Directorate for Climate Change, the Director of the Centre for Climate Change and Biodiversity, and the National Directorate for Research at the Ministry of Agriculture and Fisheries. The SES also met with members of local NGOs and representatives from international organisations such as FAO, UNDP, and the Red Cross Society of Timor-Leste.

Table 3: Consultations conducted by the in-country consultant, September – October 2019

Date	Stakeholders
13 September 2019	• Raphy Favre, FAO
19 September 2019	• Juliao dos Reis, NDA, Secretary of State for Environment, Coordinating Minister for Economic Affairs • Maria dos Reis, Assistant to NDA
24 September 2019	• His Excellency, Secretary of State, Demetrio do Amaral de Carvalho • Director Terencio Fernandes Moniz, National Directorate Meteorology and Geophysics, Ministry of Transport and Communication • Dr. Claudino Ninas Nabais, National Directorate for Research, Ministry of Agriculture and Fisheries • Juliao dos Reis, NDA, Secretary of State for Environment, Coordinating Minister for Economic Affairs • Maria dos Reis, Assistant to NDA • Raphy Favre - FAO
25 September	• Celine Becker, COSPPac Manager, Australian Bureau of Meteorology, Climate and Oceans Support Program in the Pacific (COSPPac). • Simon McGree, Climatologist Team Leader, Australian Bureau of Meteorology, Climate and Oceans Support Program in the Pacific
27 September 2019	• Director Augusto Pinto, National Directorate for Climate Change, Secretary of State for Environment, Coordinating Minister for Economic Affairs • Adão Barbosa UNFCCC focal point and Director of the Centre for Climate Change and Biodiversity at UNTL • Juliao dos Reis, NDA, Secretary of State for Environment, Coordinating Minister for Economic Affairs
30 September 2019	• His Excellency, Secretary of State, Demetrio do Amaral de Carvalho • Dev Bissoon, UNDP • Kristen Mandala, Disaster Risk Reduction and Climate Change Program Manager, Mercy Corps • Juliao dos Reis, NDA, Secretary of State for Environment, Coordinating Minister for Economic Affairs • Maria dos Reis, Assistant to NDA • Raphy Favre, FAO

Table 4: In-country Stakeholder Engagement Schedule implemented between September and December 2019

Date	Stakeholders
1 October 2019	• Adão Barbosa, UNFCCC focal point and Director of the Centre for Climate Change and Biodiversity at UNTL • Juliao dos Reis, NDA, Secretary of State for Environment, Coordinating Minister for Economic Affairs • Maria dos Reis, Assistant to NDA
2 October 2019	• Celine Becker, COSPPac Manager, Australian Bureau of Meteorology, Climate and Oceans Support Program in the Pacific (COSPPac) • Simon McGree, Climatologist Team Leader, Australian Bureau of Meteorology, Climate and Oceans Support Program in the Pacific
3 October 2019	• Dr. Claudino Ninas Nabais, National Directorate for Research, Ministry of Agriculture and Fisheries • Raphy Favre - FAO • Juliao dos Reis, NDA, Secretary of State for Environment, Coordinating Minister for Economic Affairs • Maria dos Reis, Assistant to NDA
7 October 2019	• Director Augusto Pinto, National Directorate for Climate Change, Secretary of State for Environment, Coordinating Minister for Economic Affairs • Elda da Costa; National Directorate for Climate Change, Advisor to the Director • Juliao dos Reis, NDA, Secretary of State for Environment, Coordinating Minister for Economic Affairs: • Maria dos Reis, Assistant to NDA
7 October 2019	• David Palasits Country Manager • Elda da Costa; National Directorate for Climate Change, Advisor to the Director • Juliao dos Reis, NDA, Secretary of State for Environment, Coordinating Minister for Economic Affairs • Maria dos Reis, Assistant to NDA
7 October 2019	• Emi Belo, Project Manager DRR • Gil Hermenegildo C. Rente, Head of DM Division, Cruz Vermelha De Timor-Leste • Anacelto Bento Ferreira, Secretary General • Juliao dos Reis, NDA, Secretary of State for Environment, Coordinating Minister for Economic Affairs
10 October 2019	• Agostinho Cosme Belo – National Director for Disaster Risk Management • Joel Maria Pereira, Advisor, Disaster Risk Management • Kristen Mandala, Disaster Risk Reduction and Climate Change Program Manager, Mercy Corps • Juliao dos Reis, NDA, Secretary of State for Environment, Coordinating Minister for Economic Affairs • Maria dos Reis, Assistant to NDA

September 2019 to February 2020	**Pacific Science Solutions / Melbourne Headquarters** **Stakeholder Interactions** PSS Directors had multiple interactions with stakeholders both in TL and with TL regional, NGO and Global partners. These interactions included Teleconferences, Skype, WhatsApp, email and Viber contacts. Interviews were conducted with the following participants. Government of Timor-Leste • Juliao dos Reis, NDA, Secretary of State for Environment, Coordinating Minister for Economic Affairs[13] • Terencio Fernandes Moniz, Director, Timor-Leste's National Directorate for Meteorology and Geo-physics[14] • Joel Maria Pereira – Advisor NDOC[15] • Gil Hermenegildo C. Rente, Head of DM Division, Cruz Vermelha De Timor-Leste[16] National Stakeholder in Timor-Leste • Craig McVeigh, Similie [17] • David Roach, Catalpa[18] Regional Organisations • A.R Subbiah, Director Program Management Support, Regional Integrated Multi-Hazard Early Warning System for Africa and Asia (RIMES)[19] • Carlyne Yu, Program Management and Support, (RIMES)[20] • Celine Becker, COSPPac Manager, Australian Bureau of Meteorology[21] • Simon McGree, Climate and Ocean Team Leader, Australian Bureau of Meteorology, Climate Oceans Support Program in the Pacific (COSPPac)[22]. International Organisations • Raphy Favre, United Nations Food and Agriculture Organization (FAO) local office[23] • Kristen Mandala, Disaster Risk Reduction and Climate Change Program Manager, Mercy Corps[24]

The in-country consultant started his stakeholder consultation meetings with Dr Juliao dos Reis, NDA, Secretary of State for Environment, Coordinating Minister for Economic Affairs, and then with representatives and heads of departments of the invited sectors. The PSS team introduced the Concept Note, the proposed Project Results, and the background and objectives of the in-country stakeholder consultation. Sector representatives were asked to share their input on departmental and sector barriers and existing gaps. Each meeting included in-depth discussion of possible climate and ocean related sector-specific products and services required by the department or agency. Potential interventions and tools were discussed that would build on past and current development initiatives to enhance sustainability, as well as national institutional arrangements that would strengthen access, delivery and use of climate and ocean information and knowledge services.

Key Discussion

This section briefly summarises the discussion about priorities the Project might address.

- Installation of the Radio Communication System
- Enhance communication and information dissemination systems
- Develop Strategic Plan for Timor-Leste's DNMG
- Establishment of the EW Weather Forecasting Centre
- Upgrade and Training in Climate Database Management System

[13] 2019: Oct 15th 22nd, 31st Nov 1st, 25th, 26th 28th, 29th, Dec 5th, 20th 2020: Jan 14th, 15th,16th,23rd, 29th, 31st

[14] 2019: October 8th, 10th, 11th, 15th, 16th

[15] 2019: Dec 3rd

[16] 2019: Oct 7th 8th 9th 21st 31st, Nov 5th 6th 26th Dec 3rd, 4th, 5th 2020: Jan 28th 31st, Feb 3rd ,4th

[17] 2019: Nov 2019 27th

[18] 2019: Nov 2019 27th 28th Dec 3rd

[19] 2019: Nov 4th, 7th, 8th 2020: Jan 28th

[20] 2019: Nov 26th, 28th

[21] 2019: Nov 4th, 7th, 8th

[22] 2019: Nov 4th, 7th, 8th

[23] 2019: Sept 13th, Oct 7th, 17th, Nov 26th, 27th 2020: Jan 31st

[24] 2019: Nov 26th, 27th, 28th

- Expand AWOS network in Timor-Leste
- Expand AWS network in Timor-Leste
- Recruit and Train Staff at DNMG
- Establish a drought monitoring and forecasting system
- Funding for Oceanographer
- Conduct Public Awareness and Training
- Budget for small scale infrastructure projects that come out of UNDP Vulnerability Assessments
- Ensure that UNEP/UNDP Program aligns, no duplication, seek to complement each other
- Utilise UNEP funding to focus on technical capacity
- Utilise UNEP funding to develop training models on how to integrate climate change and DRR into National and Local Development Planning Processes
- MOU to be established between government and the UN
- Within the scope of the Project short term courses on climate, climate predictions and other necessary topics funded
- Develop sector specific communication plans for EWS
- Facilitate discussion and implementation of an SMS early warning system
- Strengthening local and village communities' understanding of, and access to, warnings and risks information associated with hydrometeorological hazards
- Landslide, flood and drought impact monitoring
- Facilitate hands-on training and provision of basic EWS equipment
- Community DRM plans
- Support communities in implementing asset data collection,
- Support communities in capacity building for subsistence farmers
- Develops a connection with local communities/last mile approach recommended
- Helps with coordination of municipal government – this could be helpful with implementation of DRM plans
- Equipment for the National Disaster Operation centre is needed, this includes laptop, drones, computers etc.

- Update Emergency Response/Preparedness; a) small scale risk mitigation – i.e. excavation and tree planting, provide megaphones for community representatives to reach the wider community, providing high wind (b) Training such as weather simulation exercises
- Acquire permanent tide gauge for the port to record real time data
- Services to access Receiver data (Himawari) from JICA to be used for weather and climate services as well as for flood forecasting
- Discussed the information needed for the budget
- Agree the daily rate for hiring local and international across the projects' life

The importance of building on current and ongoing projects, initiatives and tools was also discussed. Related activities include:

- UNDP's current program has potential to add vulnerability assessment on landslide, flood and drought at municipal/village level. UNDP is conducting vulnerability assessments (social, economic, environmental & physical/geographical) and associated work. UNDP will produce an integrated Vulnerability Assessment
- Take outcomes of Vulnerability assessments done by UNDP and potentially add them to the Project
- Integrated Community-based Project (funded by Koica but the funding will run out this year)
- Red Cross currently undertaking DRR activities (EWS is part of DRR)

Discussion with stakeholders elicited the following suggestions:

- GCF to support through budget—money would be best spent on data collection and reporting and the monitoring of the Project like Fertina, Red Cross, and Caritas
- Climate smart agricultural technologies
- Develop the national fire event monitoring capacity in relation to slash and burn agriculture
- Use satellite imagery for landcover/biomass information to produce agricultural indexes (prevention of incidents of drought/erosion increased emission) approach Indonesian Met Services about climate training and introducing new climate systems and tools.
- NDMD does a risk assessment not vulnerability assessment
- The Australian Bureau of Meteorology or BMKG to install and maintain tide gauges bought by the Project.

Summary of Key Discussion Issues

This section briefly summarises the discussion about priorities the Project might address.

- IT maintenance and amalgamation of technical services in DNMG
- Costing by the Department of Climate Change of the impacts of climate change on infrastructure
- Ocean monitoring capacity for severe weather and tsunami events for DNMG
- Recruitment and support for an oceanographer for DNMG
- Near-coast / just outside the reef monitoring
- Annual National Climate Outlook Forum

The importance of building on current and ongoing projects, initiatives and tools was also discussed. Traditional Knowledge project on climate and oceans, collection of information for the production of island lunar month calendars.

Table 5: Timor-Leste Stakeholder Engagement Schedule

The table below outlines the relevant stakeholders to be engaged for the Project. A majority of the stakeholders have already been involved during the Project feasibility study stage and additional engagement activities such as consultation, disclosure and partnerships will occur throughout the life of the Project as detailed in the Table.

During the inception phase of the Project and prior to commencing implementation, elements of the engagement strategy will be refined and unpacked. This will culminate in a revised stakeholder engagement with a schedule of consultations/engagements with the identified stakeholders for consideration by the Project Steering Committee.

The responsibilities for managing and implementing the Stakeholder Engagement Plan will rest with the Project Manager, who will work closely with the national Executing Entity (State Secretary for the Environment), Technical Partners and other national stakeholders.

Stakeholder	Interest in the Project	Influence on the Project	Proposed role in the Project	Engagement strategy
National Governments Agencies				
All Ministries and Government Departments	The Government of Timor-Leste is a key stakeholder in the Project interventions: The Project's objective is to increase Timor-Leste's resilience to hydro-meteorological disasters through enhancing its ability to provide effective Early Warning Systems.	The support of senior ministry officials will be essential to the success of the Project. They must be able to see tangible benefits for their departments through capacity building and implementation of EWS. The support of all ministry staff will be essential, and specifically, mainstreaming EWS practices into their work and addressing their own priorities for improving	The active engagement of government staff will be critical to the following activities: • Working with the Project Manager and consultants to understand how EWS can be mainstreamed into the work of their agencies. • Using activity monitoring and evaluation in planning future EWS projects and activities. • Identifying a suite of directly applicable information products relevant to their work. • Participating in consultative workshops to develop and refine EWS strategies. • Implementing a process for checking the utility of information products regularly and revising them as needed.	Throughout the Project (from inception till project closure and Terminal Evaluation), engagement will be ensured through: • Workshops and capacity building related to the design of the EWS strategy and activities. • Technical support and staff training provided to sector focal representatives on EWS, climate science, and community consultation techniques.

Stakeholder	Interest in the Project	Influence on the Project	Proposed role in the Project	Engagement strategy
		service delivery to communities.	• Proactively decreasing obstacles to mainstreaming with the Project team throughout the Project Cycle.	
Timor-Leste's National Directorate for Meteorology and Geophysics • Director Terencio Fernandes Moniz	The National Directorate for Meteorology and Geophysics (DNMG) is one of the principal implementing agencies for the Project. The DNMG will benefit from capacity-building activities, the expansion of its data observation network and support for critical meteorological infrastructure.	The DNMG's active engagement will be essential to the success of the Project. The DNMG is committed to using the Project to strengthen its provision of information services so that EWS information is mainstreamed into the work of government agencies and into science-informed resilience building and Project implementation by communities.	The Project will enable DNMG to modernise its equipment and extend its observation network to the rural districts of Timor-Leste, improving the accuracy of its climate forecasting. • An additional officer for ocean information services will enable the DNMG to expand its range of services and generate tailored products for key sectors. • Modern communication equipment will enable the DNMG to provide much more reliable information, warnings and advice to remote communities and to receive data from all districts. • The DNMG will be responsible for the maintenance of additional equipment, with the support of regional partners.	Throughout the Project (from inception till project closure and Terminal Evaluation), ongoing capacity development and support from the Project and from regional partners will raise the DNMG's profile nationally, make the work of its staff more impactful, enabling the staff to see positive impacts from their work, and enable them to influence government policy on a critical development issue. The Project will enable staff to undertake hands-on work with all communities, including remote districts, in areas DNMG has identified as high priority in its planning documents.

Stakeholder	Interest in the Project	Influence on the Project	Proposed role in the Project	Engagement strategy
National Directorate for Climate Change • Director Augusto Pinto	The NDCC is one of the principal implementing agencies for the Project. The NDCC enables training on climate change models, which feed into climate forecasts and EWS.	The NDCC is committed to ensuring the success of the GCF Project and has been engaged in the design of this Project since its earliest stages. NDCC activities will complement this Project.	The NDCC will conduct community-based workshops on the use of climate forecasts for water management.	Throughout the Project (from inception till project closure and Terminal Evaluation), NDCC will be an integral part of the Project's implementation and is already actively engaged with stakeholders in related climate change activities.
National Disaster Management Directorate (NDMD) • Agostinho Cosme Belo, National Director • Joel Maria Pereira, Advisor, Disaster Risk Management	The NDMD is a key agency for Early Warning Systems, as disaster risk reduction is an essential element of the Project.	The NDMD's engagement will be essential to the success of the implementation of EWS in Timor-Leste.	The NDMD will assist with implementing sector-specific communication plans for EWS. It will also increase public awareness and training about EWS and increase its ability to communicate early warning messages to rural communities.	Throughout the Project (from inception till project closure), the NDMD will benefit from equipment and technical support to build capacity for EWS. It will also benefit training on effective community consultation. Staff will be invited to accompany DNMG staff on visits to the districts, particularly when disaster awareness materials are being co-designed with communities, and communication methods are piloted, and any other activities where the NDMD input will be valuable.
Coordinating Minister of Economic Affairs	The Coordinating Ministry of Economic Affairs is one of UNEP's primary partners, as	The CMEA will continue to oversee the Project	The CMEA will be able to ensure that EWS activities are coordinated across relevant government ministries and directorates. This	Throughout the Project (from inception till project closure and Terminal Evaluation), the CMEA's

Stakeholder	Interest in the Project	Influence on the Project	Proposed role in the Project	Engagement strategy
• Joaquim Amaral • Juliao dos Reis, NDA • Maria dos Reis, Assistant to NDA	Timor-Leste's NDA (in the Office of the Secretariat of State for the Environment) works within this Ministry. This Ministry is also essential because it locates, retrieves and stores national environmental data, information and key documents.	through the work of the NDA.	ministry also will support the NDA to ensure that there is government approval of all activities and that they Project responds to the needs of the Government throughout the Project Cycle.	work will be highly interactive across related agencies responsible for water, environmental management, DRR, public media and engagement with local communities. Mainstreaming climate information and disaster risk knowledge into sectors is a key component of the Project and the CMEA will be supported by the project manager and regional partners.
The Ministry of Agriculture and Fisheries • Dr. Claudino Ninas Nabais, National Directorate for Research, Ministry of Agriculture and Fisheries	The Ministry of Agriculture and Fisheries is an important partner for engaging with communities on applying climate information to farming. It will work closely with FAO on these activities.	MAF will contribute to EWS through advice to the Project regarding useful information products. This will be an essential step in helping farmers to use meteorological information and increase resilience of their practices accordingly.	MAF will work with relevant Government departments and NGOs with the support of FAO's in-country experts to adapt climate information such as seasonal rainfall predictions to the needs of subsistence and commercial farmers.	Encouraging both subsistence and commercial farmers to adapt their practices to improve food security is a long-term goal (beyond the Project implementation period) that can be realised through behavioural change. Regular visits will support subsistence farmers in linking crop selection to match expected rainfall through the growing season, for instance. FAO will work with local farmers to build capacity to use impact-based forecasts and sector-specific early warning information.
National Directorate for Water Resource Management	The National Directorate for Water Resource Management (DNGRA) is responsible for monitoring and research related to water resources, including hydrology and hydraulics applications.	DNGRA has the mandate for hydrology and hydraulics and operates 14 water level monitoring stations across Timor-Leste. The water sector is a priority sector of the	DNGRA will be engaged as a priority stakeholder in the climate services value chain.	The Project will engage with DNGRA throughout implementation – particularly through the National Climate Outlook Forums, formalisation of its relationship with DNMG, strengthening of data sharing and inter-institutional

Stakeholder	Interest in the Project	Influence on the Project	Proposed role in the Project	Engagement strategy
	Whilst it collects water data, it does not have the capacity to analyse it.	Global Framework for Climate Services.		collaboration, and to integrate all water data into the new Climate Data Informatics System (CDIS).
Directorate of the Centre for Climate Change and Biodiversity at UNTL • Adão Barbosa, Director	The Directorate of the Centre for Climate Change and Biodiversity is an important partner for work with communities on applying climate change data to agricultural communities.	The Directorate of the Centre for Climate Change and Biodiversity will provide climate change data and models, which will help to improve agricultural communities' application of EWS activities.	The Directorate of the Centre for Climate Change and Biodiversity engage relevant ministries and stakeholders with climate change data and models. This will help to improve the application of EWS activities.	Climate change information and knowledge underpins effective EWS activities. The Project will train staff at the Centre for Climate Change and Biodiversity to interpret climate change model outputs, which in turn will enable staff to enhance the accuracy of their trainings provided to ministries and other stakeholders.
United Nations Environment Programme	At the request of the National Designated Authority for Timor-Leste, UNEP will be the Accredited Entity for the Project. UNEP has longstanding expertise in supporting environmental and climate change information management and early warning systems.	UNEP has particular strengths and experience in environmental programs, and EWS in particular. UNEP will be responsible for managing the implementation, financial management, evaluation, reporting and closure of the activities under the Project. UNEP will also undertake limited Executing Entity functions.	UNEP is providing support for the development of the Project Proposal and during the Project Cycle will ensure comprehensive implementation of the Project activities through an in-country Project Manager. UNEP will also liaise with GCF to ensure that all aspects of the Project are in line with GCF guidelines. In addition, UNEP will provide technical advisory and expertise to establish climate services for health, including deployment of an air quality monitoring system, in Timor-Leste.	The Project will enable UNEP to build on existing work with the Government of Timor-Leste in areas identified as high priorities by both organisations. UNEP will be closely engaged throughout the term of the Project, as it supports capacity development of EWS and air quality monitoring through assistance with workshops, provision of training, development of new tools, and monitoring and evaluation.
United Nations Food and Agriculture Organization (FAO)	FAO has an important relationship with Timor-Leste, as the maintenance of essential food security	FAO has developed a range of tools for use in Timor-Leste to assist with food security programs	FAO will contribute the following outputs: • Strengthen the agriculture drought early warning system.	Throughout the Project (from inception till project closure and Terminal Evaluation), FAO will build on its existing work with the

Stakeholder	Interest in the Project	Influence on the Project	Proposed role in the Project	Engagement strategy
• Raphy Favre	programs and monitoring and evaluation is critical for this Project.	and monitoring and evaluation.	• Disseminate EW information through MAF agriculture extension service. • Strengthen MAF multi-hazard risks management capacity for transformation of agriculture preparedness.	Government of Timor-Leste in areas identified as high priorities by both organisations. FAO is a longstanding partner with Timor-Leste and has in-country staff with broad experience in technical support and working with communities. FAO will be closely engaged throughout the term of the Project, as it provides capacity development of EWS through assistance with workshops, provision of training, development of new tools, and monitoring and evaluation.
Regional Integrated Multi-Hazard Early Warning System for Africa and Asia (RIMES)	RIMES is an international and intergovernmental institution responsible for the generation and application of early warning information in Africa and Asia. Timor-Leste is a Member State of RIMES.	RIMES supports National Meteorological and Hydrological Services in the generation of localised and customised weather and climate information; climate change risk management and adaptation options; and development of decision support tools and risk information products.	RIMES will contribute the following outputs: • Upgrade of the Climate Data Informatics System (CDIS) • Technical support to establish a National Forecasting Centre • Establishment of sector-specific impact-based forecasting and decision-support systems (DSS) for health, agriculture, disaster risk reduction and marine sectors.	RIMES has broad experience in providing technical support related to EWS in Timor-Leste. Throughout the Project (from inception till project closure and Terminal Evaluation), RIMES will be closely engaged throughout the term of the Project as it provides technical support for climate data management, weather, water and climate forecasting, hazard mapping, development of new tools, and monitoring and evaluation.
International Federation of Red Cross and Red	IFRC is the world's largest humanitarian and development network. IFRC	In the context of climate change, IFRC provides leadership, management	IFRC will provide technical support, expertise and capacity building to develop and	Throughout the Project (from inception till project closure and Terminal Evaluation), IFRC will be

Stakeholder	Interest in the Project	Influence on the Project	Proposed role in the Project	Engagement strategy
Crescent Societies (IFRC) • Erin Coughlan de Perez, Manager, Climate Science Team, Red Cross Red Crescent Climate Centre	assists its National Societies to act before, during and after disasters and health emergencies to meet the needs and improve the lives of vulnerable populations. IFRC's national focal point in Timor-Leste is the Cruz Vermelha de Timor-Leste (CVTL).	support, tools and capacity building to reduce the impacts of climate change and extreme weather events on vulnerable people.	implement Forecast-based Financing (FbF) and Early Action Protocols (EAPs).	closely engaged, alongside CVTL, to support the Project with expertise on last-mile delivery and FbF.
Indonesian Meteorological, Climatological and Geophysical Agency (Badan Meteorologi, Klimatologi dan Geofisika – BMKG) • Hanif Andi Nugraha, Head of the Center for Instrumentation, Engineering and Calibration, BMKG	BMKG has a Memorandum of Understanding (MoU) with Timor-Leste's Ministry of Public Work, Transport and Communication (under which DNMG operates) to provide technical support for the calibration of meteorological equipment, human resource development, and to exchange data and information about meteorology, climatology and geophysics. As an established WMO Regional Training Centre, BMKG also delivers training and capacity building in meteorology, hydrology and related sciences to fulfil the needs of the RA II (Asia) and RA V (South-West Pacific) regions.	BMKG continues to deliver technical support to DNMG in the areas of meteorology, climatology and geophysics, as outlined in their MoU.	BMKG will provide technical support for the assembly, installation, calibration, operation and maintenance of hydro-meteorological observations equipment to be deployed under the Project. BMKG will also provide exchange of personnel experts (knowledge sharing and training) to build capacity of DNMG staff to operate and maintain the new equipment.	Throughout the Project (from inception till project closure and Terminal Evaluation), BMKG will be closely engaged for consultation and technical support on meteorological equipment and equipment specifications. BMKG will work closely with DNMG staff to build in-country capacity for long-term sustainability of equipment operations and maintenance.

Stakeholder	Interest in the Project	Influence on the Project	Proposed role in the Project	Engagement strategy
International Centre for Theoretical Physics (ICTP) • Marco Zennaro, Science, Technology and Innovation Unit, ICTP	ICTP embraces a large community of scientists worldwide and believes that knowledge sharing, open science, and know-how transfer are critical for sustainable development.	ICTP's Science, Technology and Innovation Unit has held numerous training activities in the field of Internet of Things (IoT), with participants from Africa, Asia, Oceania, Europe and the Americas, as well as from international organisations. The Project will leverage the technical expertise of ICTP to initiate IoT approaches in Timor-Leste.	ICTP will support Timor-Leste to utilise wireless connectivity and IoT for climate services and disaster risk management. ICTP will deliver annual technical training workshops and implement a pilot study to deploy IoT-based weather stations. ICTP will also build operational capacity of NDMD through the deployment of wireless links to complement existing network infrastructure.	Throughout the Project (from inception till project closure and Terminal Evaluation), ICTP will work closely with DNMG and NDMD staff to build capacity for IoT applications through a "learn-by-doing" approach.
United Nations Development Programme Dev Bissoon, Program Manager	UNDP will be implementing a complementary EWS GCF project. It will be essential to maintain close coordination with UNDP to ensure there is no Project overlap, and that the respective Projects support each other's work, when possible.	It is essential that GCF projects do not have overlapping activities, thus it is essential that UNDP's GCF Project and UNEP's work in close coordination.	UNEP will be invited to participate in the technical working group for EWS (Sub-Activity 3.1.1).	UNDP is currently working on a complementary EWS program. It will be essential to coordinate closely during the Project Cycle to ensure that the activities support each other and do not overlap. The multi-level institutional arrangement to establish synergy and effective collaboration with UNDP-led projects in Timor-Leste is outlined in Section 9 of the Feasibility Study (Annex 2).
Civil Society Organisations				

Stakeholder	Interest in the Project	Influence on the Project	Proposed role in the Project	Engagement strategy
CVTL (Red Cross of Timor-Leste), • Emi Belo, Project Manager DRR • Gil Renta, Chief of DRR • Anacelto Bento Ferreira, Secretary General	CVTL will benefit from opportunities to expand their work, particularly in rural communities, and extend the range of their activities, building on lessons learned as well capacity-building activities from international experts. The Project's gender focus will expand opportunities for women to influence communications and to use information products.	CVTL has a wide network in rural communities and will be invited to participate in the ongoing development and implementation of the EWS community activities. CVTL will implement essential EWS services in rural areas of Timor-Leste.	CVTL will contribute to EWS activities in rural communities and extend the range of these activities to the last mile. Moreover, CVTL will engage in capacity-building activities with local communities and help to provide much-needed EWS equipment.	Throughout the Project (from inception till project closure), CVTL will lead awareness raising campaigns with the support of the Project. It will also receive training in professional standard community consultation techniques to ensure women, young people, and people with disabilities are able to participate fully in consultation. It will also advise Project implementing agencies on effective communication with local communities.

Stakeholder	Interest in the Project	Influence on the Project	Proposed role in the Project	Engagement strategy
Other NGOs, community groups, women's organisations and representatives	Community representatives are the key beneficiaries of the Project, which has as its overall goal to enable sectors and communities in Timor-Leste to enhance their livelihoods and increase their resilience to climate change and climate-related hazards.	The active engagement and meaningful participation of local communities – particularly women and other marginalised groups – will be essential to the success of the Project and ensuring that it delivers transformative impact to the last mile.	The Project will work to empower communities with improved access, understanding and application of climate information and risk knowledge so that they can implement sustainable climate resilience strategies and preparedness actions. This will include the following activities: • Participation in EWS working groups • Co-development of socially inclusive and gender-responsive localised communication strategies • Participation in agriculture extension service activities • Co-development of Community Action Plans and participation in risk mapping and focus group discussions on vulnerability and disaster preparedness capabilities • Targeted awareness raising and education on climate hazards, related health risks and EWS • Co-development of Forecast-based Financing/Early Warning Early Action Early Action Protocols	Throughout the Project (from inception till project closure and Terminal Evaluation), the Project will emphasise active engagement and meaningful participation of communities throughout the implementation period and as a long-term strategy for local ownership and empowerment. The Project will ensure that communities participate in sharing of information, knowledge and lessons learned; and consultation, collaboration and evaluation in partnership with community representatives will be an ongoing priority.