





"Strengthening Community Resilience to Climate-induced Disasters in the Dili to Ainaro Road Development Corridor, Timor-Leste (DARDC)"

Project ID:	
Atlas Award ID:	
PIMS:	

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GEF Agency: United Nations Development Programme (UNDP) Implementing Entity: United Nations Development Programme (UNDP) Partners: National Disaster Management Directorate (Ministry of Social Solidarity) and National Directorate for International Environmental Affairs and Climate Change (Ministry of commerce, Industry and Environment), National Institute for Public Administration (Ministry of State Administration), Ministry of Agriculture and Fisheries (MAF) Focal Area: Climate Change Adaptation





Terminal Evaluation Report

May 30, 2019 Dr. Arun Rijal (Independent International Consultant) Mr. Bonaventura Alves Mangu Bali (Independent National Consultant) "Strengthening Community Resilience to Climate-induced Disasters in the Dili to Ainaro Road Development Corridor, Timor-Leste (DARDC)"

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Project Period 2014-2018

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> Terminal Evaluation Report May 30, 2019

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The views expressed in this report are intended to offer an overview of, and some of the lessons learned from this Project as it comes to its conclusion. We have tried to balance thoughts and to offer fair perspectives of what was observed and learned from people far more knowledgeable about the Project and its context than we will ever be.

And finally, one of the delights of this sort of work remains that of visiting a new and extremely welcoming country and going home again having made new friends, seen new things, and witnessed with great admiration the dedication and enthusiasm that so many people bring to their work in strengthening community resilience to Climate-induced disasters. We would like to thank them and wish them every success in their continuing endeavours.

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30th May 2019

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Acronyms and Terms

BCDRP	Building Climate & Disaster Resilience Project
CBO	Community Based Organisation
CBDRM	Community Based Disaster Risk Management
CAP	Country Action Plan
CEO	Chief Executive Officer
СО	Country Office
CPAP	Country Program Action Plan
CSIRO	Commonwealth Scientific & Industrial Research Organisation
CTA	Chief Technical Advisor
CVCA	Community Vulnerability Capacity Assessment
CVTL	Red Cross Timor Leste
DARDC	Dili to Ainaro Road Development Corridor
DDOC	District Disaster Operations Centre
DDMC	District Disaster Management Committee
DIM	Direct Implementation Modality
DoF	Department of Forest
DRM	Disaster Risk Management
DRR	Disaster Risk Reduction
EA	Executing Agency
E&E unit	Energy and Environment Unit
ENSO	EI Nino-Southern Oscillation
EWS	Early Warning System
GEF	Global Environment Facility
GOTL	Government of Timor-Leste
HO	Headquarters
IA	Implementing Agency
IC	International Consultant
INAP	National Administration Public Institute
INGO	International Non-Governmental Organisation
IPCC	Intergovernmental Panel on Climate Change
IWSM	Integrated Watershed Management
LDCF	Least Development Country's Fund
LOA	Letter of Agreement
MAF	Ministry of Agriculture and Forest
MAF-	Ministry of Agriculture and Forest and Agriculture and Land Use Geographic
ALGIS	Information System (Timor-Leste)
MAF-FAO	Ministry of Agriculture and Forest and Food and Agriculture Organisation
MCIE	Ministry of Commerce, Industry and Environment
MDG	Millennium Development Goal
M&E	Monitoring and Evaluation
MoF	Ministry of Finance
MoU	Memorandum of Understanding
MPW	Ministry of Public Works
MSA	Ministry of State Administration
MSS	Ministry of Social Solidarity
MTR	Mid-Term Review
ND	National Director
NDES	National Directorate for Extension Service

NDIEACC	National Directorate for International Environmental Affairs and Climate
	Change
NDMD	National Disaster Management Directorate
NDOC	National Disaster Operations Center
NIM	National Implementation Modality
NGO	Non-Government Organisation
PB	Project Board
PDID	Integrated Municipal Development Planning
PDIM	Program Dezenvolvementu Integradu Municipio
PIF	Project Information Framework
PIR	Project Implementation Review
PMU	Project Management Unit
IPG	Research Institute for Geology
PNTL	Policia Nacional de Timor Leste
ProDoc	Project Document
PSC	Project Steering Committee
RAEBIA	Name of the Local NGO
RAIBEA	Name of the Local NGO
ROtI	Review of Outcome to Impact
RRF	Result Resource Framework
SDG	Sustainable Development Goal
SMART	Specific, Measurable, Achievable, Relevant, Time-bound
SOP	Standard Operating Procedure
TE	Terminal Evaluation
TEC	Terminal Evaluation Consultant
TWG	Technical Working Group
UN	United Nations
UNCCD	United Nations Convention to Combat Desertification
UNDAF	UN Development Assistance Framework
UNDP	United Nations Development Programme
UNDP-CO	United Nations Development Programme Country Office
SSRI	Strengthening Climate-Resilience of Small Scale Rural Infrastructure (Project)
UNDP HQ	UNDP Headquarters
UNFCCC	United Nations Framework Convention on Climate Change
US\$	United States Dollar
WB	World Bank
WB-BCDRP	World Bank and Building Climate & Disaster Resilience Project

Currency of Timor-Leste is the American Dollar. Timor-Leste only have coin of their own which is also called cents and is equivalent to American currency.

ii. Executive Summary

This Terminal Evaluation (TE) has been conducted as part of the Monitoring and Evaluation plan of the UNDP/GEF Project: "Strengthening Community Resilience to Climate-induced Disasters in the Dili to Ainaro Road Development Corridor, Timor-Leste (DARDC)", and will be referred to as the "Project" in the scope of this report. The TE mission to Dili was conducted from 27th April to 9th May 2019. Extensive consultations with the project partners were also conducted prior to and following the mission to ensure a good understanding of the project's results; leading to the submission of the TE report on the date of this report.

Project Summary Table

As per requirements for TE, the Project Summary Table is provided below:

Project Summary Table				
Project Title:	Strengthening Community Resilience to Climate-induced Disasters in the Dili to Ainaro			
	Road Development Corridor, Timor-Leste (DARDC)			
GEF Project ID:	5056		at endorsement	at completion
			(US\$)	(US\$)
Project ID:	00090905	GEF Fund:	5,250,000.00	\$
Atlas Award ID:	00081757			
				4,732,872.98
				(figures as of 31
				May 2019)
Country:	Timor-Leste	National Govt of	13,026,780.00	1,209,667.18
		Timor-Leste in		
		Kind:		
Region:	Asia and the Pacific	UNDP:	650,000.00	539,011.61
Focal Area:	Climate Change Adaptation	Other Partners	23,690,000.00	0
		Total co-	37,366,780.00	1,748,678.79
		financing:		
Executing	UNDP	Total Project	42,616,780.00	6,204,888.89
Agency:		Cost:		
Other Partners	NDMD, MSS, MAF	MAF ProDoc Signature (date project began):		10 October 2014
involved:		(Operational)	Proposed:	Actual:
		Closing Date:	October 2018	October 2019

Brief Description of Project

The Democratic Republic of Timor-Leste is a small island state located in South-East Asia in the lesser Sunda archipelago. The country received independence in 2002 so had limited socio-economic development. The development challenges of this county are i) addressing severe human and institutional capacity gaps for development; ii) stimulating stable economic growth, particularly for the domestic market; iii) addressing gender inequalities; and iv) managing the socio-economic pressure from a rapidly growing population. Limited road infrastructure is identified as a major constraint to national economic development. In rural areas in particular, road infrastructure is underdeveloped. This results in limited access to markets for agricultural communities, contributing to the limited agricultural productivity and rural poverty prevalent across the country. The Government of TL is investing in transport infrastructure as a basis for securing the country's long-term development goals. Roads provide access to agricultural areas and facilitate the transport needs of agriculture, manufacturing, services etc. The interior of Timor-Leste is mountainous, with about 40% of the country having a slope greater than 20⁰. The

Strengthening Community Resilience to Climate Change induced disasters in the Dili to Ainaro Road Development Corridor, Timor-Leste (DARDC) - TE Report Page viii mountainous terrains of the country make the construction and maintenance of transport networks difficult and expensive. There is no strategy in place to link wider landscape stabilisation and landscape-wise management of road development corridors for road infrastructure sustainability.

Timor-Leste has a tropical climate with relatively constant temperatures throughout the year. The northern part of the country experiences a uni-modal rainfall pattern, with four to six wet months from December to April or June. The southern part of the country experiences a bi-modal rainfall pattern comprising seven to nine wet months with two peaks, one from December and the other from May. The EI Nino-Southern Oscillation (ENSO) is a strong determinant in year-to-year variations in rainfall and temperature. As per prediction in the IPCC report, the temperature of Timor-Leste is expected to increase by 0.3 to 1.2 °C by 2030 and 0.8 to 3.6 °C by 2070. Rainfall is predicted to decrease in the dry season and increase in the wet season with overall rainfall increasing by 7 to 13% by 2050. Extreme rainfall events such as tropical cyclones are expected to decrease in frequency but increase in intensity. It is also predicted that the rainfall will increase particularly in the high altitudes which could increase landslides. Other expected effects of climate change include sea level rise, ocean acidification, increase in annual temperature, greater unpredictability of rainfall patterns and increase in intensity of extreme rainfall events.

The project aims to reduce climate induced disaster risks by targeting and strengthening institutional and technical capacities of sub-national government institutions to plan for and implement disaster risk management (DRM) measures using ecosystem-based approaches. Significant barriers to achieving the implementation of DRM using ecosystem-based approaches include: i) limited knowledge and understanding of climate-induced disasters; ii) limited capacity of subnational officials to plan for and respond to disasters; and iii) insufficient financial resources to deliver DRM measures using ecosystem-based approaches. Project expected to achieve these through 3 major components that include 6 outputs.

Project aims to address the problem by:

- i) enhancing integration of climate change into national DRM policy;
- ii) providing access to knowledge and training on DRM;
- iii) strengthening institutional capacity for planning, budgeting and delivering investments into DRM, particularly at sub-national level;
- iv) developing early warning systems to reduce risks posed by climate-induced disasters; and
- v) reducing vulnerabilities of communities along the DARC by reducing damage to road infrastructure through implementing climate-resilient and ecosystem based approaches to DRM.

Because it is understood that:

- Integration of threats in policy and effective enforcement of policies will help to address climate induced threats.
- Evidence based planning will help to address problem effectively.
- Enhancing capacity of the implementing agencies will strengthen the management practices.
- Arrangement of early warning will reduce risk.
- Increased awareness also help communities and also government to take precautions to reduce damage from climate induced risks.
- Climate resilient and ecosystem based approach to DRM help to reduce damage to infrastructure and also strengthen resilience of the community to climate risks.

The Project Document was approved jointly by Government of Timor Leste and UNDP in October 2014 for the duration of four years. The Project was implemented by UNDP in close cooperation with the National Disaster Management Directorate (NDMD) under Ministry of Social Solidarity (MSS) and Directorate for Forestry under the Ministry of Agriculture and Fisheries (MAF) through Project Management Unit (PMU) and also in close coordination with local government, various other institutions and local communities. UNDP as implementing and executing agency was responsible for the completion of activities like procurement, recruitment, monitoring, and

financial disbursement. The Project has been executed in accordance with the standard rules and procedures of the UNDP DIM and partial NIM modality. The Project budget at approval was US\$ 42,616,780 of which US\$ 5,250,000 is the GEF Grant, US\$ 650,000 (in kind) is provided by the UNDP, US\$ 13,026,780 kind contribution from Government of Timor-Leste and US \$23,690,000 (in kind) contribution from other partners.

Rating Table

As per UNDP and GEF's requirements for TE, the Terminal Evaluation Rating Table is provided below:

1. Monitoring and Evaluation	Rating	2. IA& EA Execution	Rating
	Highly Satisfactory		Satisfactory
M&E design at entry		Quality of UNDP supervision	
	Moderately		Satisfactory
M&E Plan Implementation	Satisfactory	Quality of Execution by Executing	
		agency	
	Satisfactory		
Overall quality of M&E		Overall quality of Implementation /	Satisfactory
		Execution	
3. Assessment of Outcomes	Rating	4. Sustainability	Rating
	Relevant		Likely
Relevance		Financial resources:	
	Satisfactory		Likely
Effectiveness		Socio-political:	
	Satisfactory		Likely
Efficiency	,	Institutional framework and governance:	Ĵ
	Significant		Likely
Likelihood of Impact	U	Environmental:	, i i i i i i i i i i i i i i i i i i i
	Satisfactory	Overall likelihood of sustainability:	Likely
Overall Project Outcome Rating		Stakeholder participation	Highly Satisfactory

Note: Justification of rating is given in Annex V.

KEY SUCCESSES

The project results were measured against achievement indicators guided by evaluation questions (Annex IV). The DARDC Project has been well designed, but some problems were observed in management and implementation in the beginning of the project but later were improved and the project achieved most of its targeted activities. The project team managed to deliver a series of interventions that have reduced the threats of Dili-Ainaro corridor and contributed to the improved livelihoods of local communities from the project districts of Timor-Leste. DARDC project assessed capacity of NDMD (MSS), DoF (MAF), MSA and MCIE and developed and conducted a series of trainings for capacity enhancement. The project also developed an organizational strategy to strengthen INAP's capacity. It has also updated and widened extent of the portfolio of training modules to include aspects that are not sufficiently covered within the current portfolio and both CBDRM and DRM manuals have been approved by the government. Similarly, DRM trainings were also conducted for national and district officials benefiting 250 government officials and 250 local members on CBDRM.

The project also developed an organizational strategy for a national disaster database to coordinate the knowledge management of NDMD (under UNDP-SDRM), NDIEACC (for UNDP-SSRI) and the national Climate Change Center. The Project developed and disseminated knowledge and awareness products documenting good practices for DRM from the national and international project/initiatives. NDRM policy was revised to integrate Sendai

Strengthening Community Resilience to Climate Change induced disasters in the Dili to Ainaro Road Development Corridor, Timor-Leste (DARDC) - TE Report Page x Framework for DRR and climate change adaptation and submitted to the government for approval. Capacity assessment of NDMD, NDIEACC, MAF and other DRM stakeholders to identify institutional and organizational capacity gaps was conducted. The Project developed a Gender Strategy and an Action Plan to recommend sectoral policies, plans and strategies on gender describing institutional, implementation modalities and function. Policy briefs were produced and disseminated to government staffs of line ministries and institutions.

Though the local governments had its regular programs for disaster prevention due to limitation of budget they were not able to conduct sufficient activities. To encourage local institutions in disaster prevention, project made a provision of providing topping funds (top-up grant) to expand their activities. A top-up grant mechanism (grant program) for local DRM institutions and local administrations increased financial support for disaster prevention and preparedness activities as well as general resilience measures. For the management of top-up grant, guidelines and operational manuals were developed. The project also supported establishment of women's group in each suco/aldeia with DRM funding and women groups are actively involved in implementing community action plan. To facilitate identification of activities, a list of activities for intervention and preparedness were developed. Communities were sensitized through several training sessions and were also involved in participatory community vulnerability assessments. The community driven and gender-focused community action plans were developed through CVCA process focusing measures to reduce the climate induced disaster risks and vulnerabilities of the target communities.

The project also assessed status of existing early warning and response system to identify best practices, traditional knowledge, gender considerations and capacity gaps. Based on these information, a model and SOPs for EWS was developed through stakeholder consultation and expert analysis. The project also conducted awareness and training campaigns on EWS. Still training for communities to use information from EWS for decision making to protect lives, properties, agricultural resources and infrastructures from climate induced disasters is remained to complete. Six automatic weather stations were installed, which were handed over to relevant government department for future management. The project has also procured two sets of equipment for landslide and flood monitoring and is in the process of installation.

Existing data from the WB-BCDRP, UNDP-SDRM and MAF-ALGIS as well as remote sensing imagery were collated to develop a GIS-based database of geographical, geological and land use characteristics of the DARDC. The GIS-based data were integrated with the CVCAs and CAPs to develop watershed hazard and risk maps identifying risk areas posing a threat to road infrastructure as well as economic and livelihood assets. Project also provided support to the MAF to integrate the watershed management plans at the local level into the Strategic District Plans and the PDID process.

The watershed management plan was developed to address the vulnerabilities of road infrastructure as well as local communities in the DARDC. Project introduced fukuoka-style seed-balls technique for afforestation to rehabilitate larger vulnerable slopes, which were previously damaged by slash and burn agriculture practice, erosion and other forms of ecosystem degradation. 220,000 seedballs were prepared and disseminated for reforestation. Various awareness materials were produced and disseminated to wider audiences for promoting public awareness on watershed management approaches to reduce hazards posed by climate induced disasters.

The project closely collaborated with the Ministry of Social Solidarity, Directorate of Agriculture and Forestry, relevant other departments and local governments and community groups. Furthermore, the project through capacity enhancement, policy revision and establishment of a knowledge base contributed in mainstreaming environment issues of vulnerable Dili-Ainaro Road Corridor area and Climate Change in development planning process of local governments. Through project activities, local communities, community based institutions and government have begun to understand the linkage of climate change, disaster and land management and the potential impact of on livelihood and economy.

Strengthening Community Resilience to Climate Change induced disasters in the Dili to Ainaro Road Development Corridor, Timor-Leste (DARDC) - TE Report Page xi

KEY PROBLEM AREAS

Project had many diverse activities but there was a lack of vision and coordination among the partners. Due to that the project was not able to move ahead in the initial years. Confusion and weak management also delayed procurement of equipment and services. After recruitment of new CTA, management was able to make some improvement in inter-government institutions' coordination but still improvement in coordination among government institutions and with other stakeholders is needed. There is still need of improvement in communication between government institutions at national level, subnational level, between national to sub-national level and with community institutions. Staff turnover in NDMD also affected project implementation as it affected institutional memory. Likewise, before the mid-term of the project, PSC only met four times in 32 months and TWG met only once. Implementation of the project activities were influenced from Dili, i.e. approach was top-down, which needs improvement in the future projects as that affect ownership and long-term sustainability. Some institutions were not showing serious responsiveness. One example of lack of commitment was that even after the handover of the weather stations, the relevant institution was not monitoring the functioning of equipment and was not taking action to maintain and clean the weather stations to remove shrubs and branches of the trees which obstructed the smooth functioning of solar panels and equipment.

Main conclusions, recommendations and lessons learned

Conclusion

The project was able to accomplish most of the activities and the remaining ones are also expected to finish in the remaining months of the project and will contribute towards meeting the targets with follow up and support from the implementing and executing agencies. To address the DRM related problems, the project intervened in seven main areas: 1) review and improvement of policies, 2) awareness raising, 3) infrastructure development, 4) weather warning arrangement, 5) plantation and improvement of farming practices with technical knowledge and added irrigation facilities, 6) improvement of health by drinking water services and 7) improvement of rural household economy. The policy development approaches included revision of policies and plans to mainstream DRM. Similarly, municipality level awareness training were conducted to enhance knowledge on DRM, which will influence local level planning to mainstream DRM and to improve resilience to climate change. To encourage evidence based planning, the project conducted studies and generated knowledge base that was supported with GIS mapping. Community based small scale infrastructure facilities such as water tanks and distribution pipes, irrigation canals, check dams, gabion walls, river control structures, short bridges and automatic weather stations were constructed to enhance resilience and strengthen adaptation. Without addressing livelihoods of the people it is not possible to address environmental issues as poverty is one of the root causes of problem. Hence, the project trained farmers for better farming practices, sustainable fisheries, agro-forestry and other income generating activities, which provided the dual benefits of improving household economy and also supported environmental protection and disaster management. Developing clean water supply helped to decrease drudgery of women who otherwise had to travel long distance to fetch water. Activities like plantation, gabion wall and check dams addressed erosion problems and protected economically very important Dili-Ainaro road infrastructure. To disseminate information to a large audience, information generated by the project was uploaded in websites of the implementing Ministry and UNDP, and networking with like-minded institutions within the country. Awareness trainings, radio, television programs, brochure distribution, sign posts and campaign programs also helped to make large audience aware on the project activities and understand the environmental issues.

This Project was designed with provision for appropriate management arrangements for Disaster Risk Management (DRM) in the Dili-Ainaro corridor and was able to implement most of its planned activities showing some initial sign of impacts. The automatic weather stations will help to provide early warning on possible disaster risk to communities to safeguard their lives and properties. The irrigation facilities together with knowledge on better farming practices (with financial support) will help to increase yield contributing household economy and other income generation activities from top-up and community grants will further strength local economy. Similarly, target of increasing green coverage through tree plantation and agro-forestry was completed and plantation success

Strengthening Community Resilience to Climate Change induced disasters in the Dili to Ainaro Road Development Corridor, Timor-Leste (DARDC) - TE Report Page xii rate was also very good. Automatic weather stations were established but stopped functioning after three months. After the issue was raised by the TEC, it was repaired and started producing weather information again. The landslide and flood monitoring equipment installation were ongoing and expected to complete in the remaining time of the project. Similarly, the capacity development activity of communities and local governments to utilise weather information was in plan and expected to complete in the remaining time of the project. The project conducted various awareness programs for communities, local government and national government staffs to raise awareness. However, government institutions still need to be more responsible in carrying out project activities to achieve the outcomes of the project. The Project is able to change attitude of communities and local and national government personnel. Project implementation was very slow in the initial years but after the appointment of a new manager, it moved very fast and dramatically completed most of the activities. Despite several difficulties, the project has managed to deliver a series of interventions that have reduced the environmental threats to a large extent. This has partly been achieved through generation of awareness from local to the national level, mainstreaming DRM into development planning through mainstreaming disaster risks in development plans, creating a knowledge base and facilitating access to it, as well as construction of physical structures to combat soil erosion, landslides and deforestation. The project has been underpinned by good science but a technical back up was weak in case of automatic weather station (relevant institution should take proactive role) and always there are still rooms for further technical improvement. One of the important achievements of the project is that it has enhanced capacity to incorporate ground information related to DRM, socio-economic condition, environmental threats and management approach into the development planning process of the local government in the pilot areas; and improved environmental awareness and raised concerns about environmental risks and ecosystem services at the local communities and the government.

To make the outcomes and interventions sustainable, the project formed community groups, trained them in DRM, farming techniques, controlling erosion and utilising weather information for preparing themselves to potential disasters. Similarly, local as well as national government staffs were trained to enhance their knowledge who have shown willingness to replicate in new areas. They have also committed to continue supports to the activities of this project. The community members were made aware of the benefits of practicing sustainable harvesting of ecosystem services, managing water, conduct various activities to control erosion and landslides etc. The project tested programmatic approach of addressing environmental issues with participatory planning and implementation. Since these approaches showed many positive impacts, the lessons learned from this should be replicated in other vulnerable areas of Timor-Leste. Only thing left to complete is development of communication system for early warning mechanism and to conduct training for local government and the community institutions to utilise the weather information for avoiding damage from climate induced disasters and approval of revised NDRM policy to integrate climate change adaptation. It is expected that within the remaining months of the project these will be completed including an exit strategy for the sustainability and the maintenance of the project activities.

Recommendations

- I. As rural economy is very weak and are very much vulnerable to the disasters due to weak resilience, future projects should have provision of more budget allocation for high economic returning activities. The project should also study market opportunities for various local products at local, national and international markets in case of high value products. There should also be a plan for market promotion and linkage both rural to urban areas.
- II. Timor-Leste is surrounded by sea from three sides. Future project should also explore opportunity of harvesting fish or other sea creatures including pearl from the sea for improvement of nutrition and economic development.
- III. Future project should consider promoting alternative energy sources including wind, solar and hydro to reduce pressure on the forests.
- IV. The automatic weather stations stopped functioning after 3 months of operation and no initiation was taken to repair them until the issues were raised by the TE consultants with the project Director. Maintenance of weather stations should be done regularly to avoid problems in the future so that intensions of these weather stations

Strengthening Community Resilience to Climate Change induced disasters in the Dili to Ainaro Road Development Corridor, Timor-Leste (DARDC) - TE Report Page xiii could be fulfilled. The weather stations are already handed over to the Meteorology Department so it's their responsibility to take care of the equipment and to keep the sites clean by removing shrubs. The equipment has 2 years warranty so if any problem arises with the equipment, the responsible agency should inform UNDP immediately or communicate to the supplier. The landslide and flood monitoring stations were not completed. These works should be completed as early as possible. The project should also conduct training for the local government and communities on early warning communication system for safeguarding their lives, properties and public infrastructures.

V. The project should develop an exit strategy including arrangement of reinforcing benefits of this project.

Lessons Learned

- Community organisations lack scientific knowledge and are ill-equipped for handling such projects, hence support to enhance their knowledge and strengthen their capacity will help to encourage them to continue in adapting risk of climate change and there by facilitate a cooperative approach for reducing damage from the climate change induced disaster. Moreover, local adaptation knowledge is easily adapted by the rural communities. Local knowledge should be promoted together with scientific knowledge to respond to the local situations as they are more easily adapted by the rural communities. Local communities were good in identifying signs of disaster, land degradation, effect to catchment function like water reservoir and proposing suitable and feasible mitigation measures.
- Working directly through existing government structures brings dividends: The project had chosen to work directly with the National Disaster Management Directorate (NDMD) under the Ministry of Social Solidarity (MSS), Directorate for Forestry under the Ministry of Agriculture and Fisheries (MAF) and other line ministries and local governments, rather than setting up parallel implementation structures. This decision has proved to be very successful not only in empowering government by providing experience and training, but also in developing effective government "ownership", engagement, participation and motivation, thereby promoting long-term sustainability of the project's achievements.
- Designing a project linking various institutions from grassroots level institutions, government agencies, local authorities and communities generates huge benefits for sustainability, and the synergies developed through the process have brought greater effectiveness than that could be achieved by stand-alone projects.
- Constant contacts with communities are vital to community-based disaster management projects. Good communication and regular technical backups to project activities with the communities help to promote successful, community-based projects as they built trust and motivate the targeted local communities. To achieve this, the quality and commitment of those employed at the sites are key attributors of the project. This project initially suffered from gaps in technical feedback from technical staff of the project office and from other partner organisations which delayed the project progress in the beginning.

More on <u>Recommendations</u> and <u>Lessons Learned</u> are given on pages 43-46.

I. Introduction

1.1 Purpose of the Evaluation

As per UNDP's guidance for initiating and implementing terminal project evaluations of UNDP supported projects that have received grant financing from the GEF, this Terminal Evaluation (TE) has the following complementary purposes:

- > To promote accountability and transparency, and to assess and disclose the extent of project accomplishments.
- To synthesize lessons that can help to improve the selection, design and implementation of future UNDP activities.
- > To provide feedback on issues that are recurrent across the UNDP portfolio (Energy & Environment unit) and need attention and on improvements regarding previously identified issues.
- > To contribute to the overall assessment of results in achieving GEF strategic objectives aimed at global environmental benefits.
- To gauge the extent of project convergence with other UN and UNDP priorities, including harmonization with other UN Development Assistance Framework (UNDAF) and UNDP Country Programme Action Plan (CPAP) outcomes and outputs.

The guidance is designed to enhance compliance with both UNDP and GEF evaluation policies and procedural requirements, which are consistent and mutually reinforcing, and use common standards. The guidance also responds to GEF requirements to ensure that Terminal Evaluations of GEF-financed projects should include ratings of project's relevance, effectiveness, efficiency, monitoring and evaluation implementation as well as sustainability of results (outputs and outcomes).

By adopting "UNDP's guidance for Conducting Terminal Evaluations of UNDP-Supported GEF-Financed Projects", this Terminal Evaluation responds to both UNDP and GEF requirements for Terminal Evaluations.

1.2 Scope & Methodology

This Terminal Evaluation (TE), carried out by independent consultants, was initiated by UNDP Timor Leste as the GEF Implementation Agency for the "Strengthening Community Resilience to Climate-induced Disasters in the Dili to Ainaro Road Development Corridor, Timor-Leste (DARDC) project to measure the effectiveness and efficiency of project activities in relation to the stated objectives, and to collate lessons learned.

The TE mission was conducted over a period of 12 days between 27th April 2019 and 9th May 2019 by one International and one National Consultants. The approach was determined by the terms of reference (<u>Annex I</u>) which were closely followed, via the itinerary detailed in <u>Annex II</u>. Full details of the objectives of the TE can be found in the TOR, but the evaluation has concentrated on assessing the concept and design of the project; its implementation in terms of quality and timeliness of inputs, financial planning, and monitoring and evaluation; the efficiency and effectiveness of activities carried out and the objectives and outcomes achieved, as well as the likely sustainability of its results, and the involvement of stakeholders.

The evaluation was conducted through the following participatory approach to provide it with sufficient evidence to base the conclusions:

- > The Evaluation was evidence-based wherever possible and was conducted through the following participatory approach:
- Extensive face-to-face and if necessary Skype interviews with the project management and technical support staff, including some members of the Project Implementation Units. Throughout the evaluation, particular attention was paid to explaining carefully the importance of listening to stakeholders' views and in reassuring staff and stakeholders that the purpose of the evaluation is not to judge performance in order to apportion credit or blame but to measure the relative success of implementation and to determine learnt lessons for the wider GEF context. The confidentiality of all interviews were maintained. Wherever quotes from interviews are used in the final report, they were be unattributed to an individual unless they wish otherwise. Wherever possible,

and within time constraints, information collected were cross-checked between various sources to ascertain its veracity, but in some cases time limited this.

- Face-to-face interviews with local stakeholders, particularly local government staff, community members, other NGOs and the beneficiaries;
- A thorough review of project documents and other relevant texts, including the Project Document, revised logframe, and monitoring reports, such as progress and financial reports prepared for UNDP and annual Project Implementation Reviews (PIR) for GEF, MTR report, minutes of Project meetings, relevant correspondence, and other project-related material produced by the project staff or partners; and
- Unlike some evaluations, interviews were not carried out using a set of interview guidelines, which the lead evaluator finds too inflexible. Instead, interviews were carried out informally, focusing on certain key points, thereby allowing the evaluators to pick up on certain issues and draw vital information out from what often starts as a seeming "throw-away" answer to a question. Long experience has proved the efficacy of this method. Preparation was not required by the interviewee and there are no "right" or "wrong" answers. It is people's experiences, insights, reflections, and suggestions with or on the project that are important. An opportunity was be given by all interviewees to ask questions of the evaluators.
- TE reviewed progress towards results. This was assessed based on data provided, amongst others, in the project document, project work plan, GEF Tracking Tools, and PIRs, as well as results verified in the course of the TE mission.
- field visits to project sites.

Wherever possible the TE Consultants have tried to evaluate issues according to the criteria listed in the *UNDP Monitoring and Evaluation Policy*, namely:

- <u>Relevance</u> the extent to which the activity is suited to local and national development priorities and organisational policies, including changes over time, as well as the extent to which the project is in line with the GEF Operational Programmes or the strategic priorities under which the project was funded.
- > <u>Effectiveness</u> the extent to which an objective has been achieved or how likely it is to be achieved.
- > <u>Efficiency</u> the extent to which results have been delivered with the least costly resources possible.
- <u>Results</u> the positive and negative, and foreseen and unforeseen, changes to and effects produced by a development intervention. In GEF terms, results include direct project outputs, short-to medium term outcomes, and longer-term impact including global environmental benefits, replication effects and other, local effects.
- Sustainability the likely ability of an intervention to continue to deliver benefits for an extended period of time after completion. Projects need to be environmentally as well as financially and socially sustainable.

In general, the baseline indicators are very straight forward but detail socio-economic information and quantitative information on threats to infrastructures is lacking. These are consistent with the rationale of the project that there is a considerable knowledge gap, which the project intends to fill, or at least tries to contribute to the build-up of a science-based knowledge system. The objective of the project is to protect critical economic infrastructure for sustainable human development from climate–induced natural hazards (flooding, landslides, and wind damage) through better policies, strengthened local DRM institutions and investments in risk reduction measures within the Dili to Ainaro development corridor. The project seeks to achieve three components:

- Component 1: Knowledge and understanding of local drivers of climate-induced disasters enhanced, and consequent impacts on economic infrastructure better understood and available to policy makers, planners and technical staff
- Component 2: Sub-national DRM institutions able to assess, plan, budget and deliver investments in climate change related disaster prevention, linked to critical economic infrastructure and assets in the Dili to Ainaro development corridor
- Component 3: Community driven investments implemented to reduce climate change and disaster induced losses to critical infrastructure assets and the wider economy

The original logframe in the Project Document was revised on 29 October 2014 during the inception workshop, which did not make any significant changes except setting targets for annual activities and discussed project approaches. The

logframe, comprising three Components and three Outcomes, and six Outputs, has been used throughout as the basis for this evaluation (see <u>Annex V</u>), and the TE has evaluated the project's performance against these according to the current evaluation criteria provided by the UNDP. Project results were measured against achievement of indicators guided by evaluation questions (Annex IV).

In addition, other scales have been used to cover sustainability (Annex IX-ii), monitoring and evaluation, and to assess impacts. The Review of Outcomes to Impacts (ROtI) method also requires ratings to be made for outcomes achieved by the project and the progress made towards the 'intermediate states' at the time of the evaluation. The rating scale is given in Annex IX- iii while Annex IX-iv shows how the ratings for "achievement of outcomes" and "progress towards intermediate states" translate into ratings for the "overall likelihood of impact achievement" on a six-point scale. A rating is given a '+' notation if there is evidence of impacts accruing within the life of the project, which moves the double letter rating up one space in the six-point scale.

The results of the evaluation were conveyed to UNDP and other stakeholders (<u>Annex III</u>). Lessons learned have been placed and further explained in page 43-46.

1.2.2 Constraints

The consultants were not able to analyse differences between the budgeted and actual spending of UNDP and other partners' contributions as the actual contribution with yearly breakdown per component was not available. The consultants visited several project sites but not all, so the analysis is based on the findings of the sample sites visited, assuming the same in the remaining sites that were not visited. Language was a barrier so the the international consultant had to rely on interpretation by the national consultant, which also limited direct interaction with stakeholders.

1.3 Structure of the Evaluation Report

The TE report is structured in line with UNDP's guidance and covers the following Sections:

- Project description and development context (this includes project design, its rationale and development context, the problems that project sought to address, the objectives, establishment of baseline, key stakeholders and expected results)
- > Findings (Results of implementation and comparison with the targets asset)
 - Project Design / Formulation
 - Project Implementation
 - Project Results
- Conclusions, Recommendations & Lessons
- > Annexes.

2 Project Description and Development Context

2.1 **Project Start and Duration**

The Project Document was signed on 10 October 2014 for the duration of four years. The project inception workshop took place on 29 October 2014 and project activities were officially launched on 29 November 2014. The project was originally planned to end in October 2018 but extended with no-cost until October 2019 as recommended by the mid-term review. Final evaluation was conducted in April-May 2019.

The key timelines of the project implementation are shown in the Table below.

Key timelines	planned for	r project i	mplementation.
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Key project's milestones	Date
PIF Approval	29 May 2013
CEO endorsement	11 August 2014
Project signing	10 October 2014
Project activities launched/ Inception Workshop	29 October 2014
Mid-term Review	July-Aug 2017
Terminal Evaluation	April-May 2019
Original Planned Closing Date	October 2018
Actual Closing Date	October 2019

2.2 Problems that the Project sought to Address

IPCC and the Commonwealth Scientific and Industrial Research Organisation (CSIRO) projected notable changes in the region's climate for the future. It is expected that the temperature of Timor-Leste may increase by 0.3-1.2 ^oC by 2030 and 0.8-3.6 ^oC by 2070. Rainfall is predicted to decrease in the dry season and increase in the wet season with overall rainfall increasing by 7-13% by 2050. Extreme rainfall events such as tropical cyclones are expected to decrease in frequency but increase in intensity. Mainly the rainfall is expected to increase in high altitudes, which could accelerate landslides. Other expected effects of climate change on Timor Leste are rise in sea level, ocean acidification, increase in annual temperature, unpredictability of rainfall pattern and increase of extreme rainfall events. Already some effect of climate change is observed in 2003 with no rain for 18 months resulted in decline in agricultural production and severe food shortage. But in 2012 there was a continuous wet season throughout. These unpredictable changes in climate also resulted in increase in incidence of respiratory infections, heatstroke, dehydration, sunburn, increased fire incidence, decreased air quality and fire-related injuries, increased incidence of water and vector borne diseases, landslide damage and blocked access to homes and public infrastructure, displacement owing to flooding, loss of access to market and reduced household income, damage to livelihoods and assets and potential loss of life. Road access to rural mountain areas are the basis for economic development of rural areas but they are frequently damaged by the landslides and floods.

To address the problems, the project was designed to work at both a macro level (national scale) and a micro level (community level). At the national level, it aimed to develop and strengthen the enabling environment through the identification of legal constraints and the required intervention points at the regulatory level to mainstream disaster management in the development planning. Similarly, at the micro level it aimed to work with local governments and communities to generate awareness among local officials, communities and grassroots level organisations to strengthen their knowledge and adaptive capacity, make them aware of the benefits of using climate information or manage ecosystem in sustainable way, provide support for mitigation activities including sustainable agro-forestry, enrichment plantation, economic development of communities and addressing landslides and the flood risks.

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2.3 Immediate and Development Objectives of the Project

The overall goal of the project is "to reduce poverty and promote both rural and regional development, promote agriculture, fisheries and forestry, manage natural resources and the environment and improve infrastructure for the economic development". The objective of the project is to protect critical economic infrastructure for sustained human development from climate-induced natural hazards through better policies, strengthened local DRM institutions and investments in risk reduction measures within the Dili to Ainaro development corridor and achieved these through 3 major outcomes plus a project management component; i) knowledge and understanding of local drivers enhanced, and consequent impacts on economic infrastructure better understood and available to policy makers, planners and technical staff; ii) sub-national DRM institutions able to assess, plan, budget and deliver investments in climate change related disaster prevention, linked to critical economic infrastructure and assets in the Dili to Ainaro development corridor; iii) community driven investments implemented to reduce climate change and disaster induced loses to critical infrastructure assets and the wider economy.

2.4 Baseline Indicators Established

To measure the achievements of the project, baseline indicators were established and are as follows:

Goal: "to reduce poverty and promote both rural and regional development, promote agriculture, fisheries and forestry, manage natural resources and the environment and improve infrastructure for economic development".

Objective: Critical economic infrastructure for sustained human development protected from climate induced natural hazards through better policies, strengthened local DRM institutions and investments in risk reduction measures within the Dili to Ainaro development corridor.

Outcomes and Outputs: Project had three outcomes and six outputs. Outputs under each of the three outcomes are presented under section 2.6 (Expected Results, Page 6-7). To achieve these outputs several activities were identified and activities are described in "Achievement of Project Outcome and Output" (page 32-34).

2.5 Main Stakeholders

The project was implemented by UNDP, in collaboration with government partners. The main partner agency for this project is the Ministry of Social Solidarity (MSS). The National Disaster Management Department of MSS played a key role of bridging and ensuring the collaboration and close communication between ministries and public entities having the mandate for Disaster Risk Management, Forestry, Agro-forestry, early warning on weather, mitigation activities and economic development activities in the Timor Leste. The project involved all level stakeholders from the project development phase to implementation phase. Other stakeholders involved in the projects were INAP (training related activities), MSA, MPW, MCIE, MAF, MoF, NDIEACC (technical input in policy review in line with other environment polices), CARE International Timor-Leste (conduct CVCAs and CAPs to identify priorities for implementation), CVTL (early warning system), NDOC, DDOCs, PNTL, IPG, ND Met (SOPs for EWS and testing of EWS), NDAR (training, agricultural and forestry technical inputs, capacity building) and RAIBEA, NaTerra (NGOs to implement conservation agriculture, permaculture, reforestation, community training, training to MAF officials). The main challenge faced by the project was communication and coordination between the line ministries and the different level of government.

2.6 Expected Results

The project aimed to achieve its objective through three outcomes generated by a total of 6 outputs.

Output level indicators were also developed for each of the output and are summarised as:

- Outcome 1 Knowledge and understanding of local drivers enhanced, and consequent impacts on economic infrastructure better understood and available to policy makers, planners and technical staff;
- Output 1: National training facility established, providing services for at least 200 district officials, DDOC/DDMC members and community facilitators, in: climate risk and vulnerability assessment, damage and loss assessment, contingency planning, formal and informal EWS systems, climate related planning and budget management;
- Output 2: National DRM policy and institutional roles extended to address climate change and disaster risk reduction measures, including assessment methods, institutional and implementation modalities, functional and technical capacities and M&E systems.
- Outcome 2: Sub-national DRM institutions able to assess, plan, budget and deliver investments in climate change related disaster prevention, linked to critical economic infrastructure and assets in the Dili to Ainaro development corridor
- Output 2.1 Capacities of district and sub-district Disaster Management Committees and District Disaster Operation Centers strengthened to plan, budget and deliver climate-induced disaster prevention financing in at least two districts (eg. for resilient shelter, improved grain storage and seed replacement, windbreaks, storm drains, small scale flood protection) benefitting at least 5,000 households
- Output 2.2: Community to district-level EWS for climate-induced extreme events designed, tested and installed, with related capacities provided (contingency planning) for at least 5,000 vulnerable rural households, with a focus on women;
- Outcome 3: Community driven investments implemented to reduce climate change and disaster induced loses to critical infrastructure assets and the wider economy.
- Output 3.1: Watershed-level climate change vulnerability and risk assessments carried out within the Dili to Ainaro road corridor covering at least 35 sucos, informing district and sub-district level planning, prioritization and budgeting (linked to WB hazard assessments)
- Output 3.2: Micro-watershed management plans designed and implemented to deliver community-driven resilience measures for reducing the impacts of climate-induced disasters (flooding and landslides) in vulnerable micro-watersheds along the Dili-to- Ainaro Road Development Corridor, covering at least 50,000 hectares outside of the WB road project RoW.

Project was mainly focused in vulnerable municipalities namely Aileu, Ainaro, Manufahi and Ermera.

Table 1: Summary of expected	global environmental benefits	arising from the project

Outcome 1: Knowledge and understanding of local drivers enhanced, and consequent impacts on economic infrastructure better understood and available to policy makers, planners and technical staff	 The policy, strategy document, plans, institutional environment supporting sustainable climate and disaster management in the Timor-Leste (particularly in mountain areas) reducing risks and promoting rural economy. This will support conservation of ecosystem of global significance within the Timor-Leste, as improved rural economy means reduction in vulnerability and also reduction in dependency on forest for energy needs improving carbon stocks. Improved knowledge will help to reduce climate change induced threats because this knowledge helps community to response appropriately and with awareness among policy level people, threats will be addressed in policy and programs.
Outcome 2: Sub-national DRM institutions able to assess, plan, budget and deliver investments in climate change related disaster prevention, linked to critical economic infrastructure and assets in	 Establishment of participatory monitoring will support sustainable corridor management and reduce disaster threats. Arrangements to reduce disasters help to protect infrastructure, which help in rural economic development. Developing capacity for climate and disaster management will mainstream these issues in development planning.

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the Dili to Ainaro development corridor	 Knowledge management and dissemination in wide audience will help effective climate and disaster management, which will ultimately help to address problems related to climate change. Comprehensive approach of integrating disaster and climate risk management, infrastructure protection, early warning to protect lives and properties and economic development for enhancing adaptation and reducing vulnerability
Outcome 3: Community driven investments implemented to reduce climate change and disaster induced loses to critical infrastructure assets and the wider economy.	 Will help to address environment issues effectively. Country develops and uses communities' support in environmental management contributing in environment protection to address climate change and disaster issues and to conserve biodiversity of global significance.

3. Findings

3.1 **Project Design/Formulation**

The project was designed to address the identified problem by improving capacity of planners, policy makers and local community groups with knowledge and institutional capacity so that disaster management will be mainstreamed in the development planning and also to facilitate effective implementation of policies, plans and investments that will prevent damage to the infrastructure, control landslides, provide drinking water, promote agro-forestry with dual purpose of economic development and environment protection, promote scientific planning to mainstream disaster management in development planning, provide early warning to protect life and property. Project was aimed at reducing environmental risks to community members and also protect infrastructures by enhancing knowledge on sustainable management, knowledge of sustainable utilisation of ecosystem services and infrastructures. The design of RRF was very clear with clear output milestones, activities for each output and SMART indicators to monitor implementation and achievements. The project was designed to work at both a macro level (national government scale) and a micro level (local government and pilot sites or local scale). On the national level, it aimed to identify policy gaps and recommend legislative needs, develop policies for securing livelihood and economic development infrastructures and sustainable utilisation of ecosystem services. At the micro level it aimed to work at developing capacity of local government and community groups to address climate induced threats to livelihood and also development of infrastructures, generating awareness among communities and authorities, facilitating decision making of fishers and farmers on sustainable resource use, control soil erosion, maintain watershed and promote environment friendly income generation activities. Project cites were identified based on the information on vulnerability.

The implementing and executing institutions were involved in the project from the project design phase and the design involved a thorough analysis of capacities of various partners and their interests. Project design incorporated lessons learned from several relevant projects in Timor Leste and other island countries but still technical aspects of some of the activities have room for improvement to make them more effective and sustainable. The roles and responsibilities of the implementing partners and other institutions were clearly defined in the project design. Hence to address the identified problem, the project was designed to apply the following approaches:

- (i) Revised policy to mainstream DRM with focus on women issues;
- (ii) Conducted capacity assessment and developed and implemented capacity enhancement training for National, sub-national and community level institutions;
- (iii) Constructed irrigation canals and also drinking water reservoir and distribution pipes;
- (iv) Conducted agro-forestry and horticulture activities to support rural livelihood;
- (v) Constructed check dam and Gavion walls to control flood and landslides;
- (vi) Engaged with global, regional and national research networks and centres working on DRM issues;
- (vi) Developed risk and vulnerability maps for Timor-Leste;
- (vii) Conducted enrichment plantation on the hills along the Dili-Ainaro road corridor;
- (viii) Established community based system for addressing land degradation, deforestation and other environmental issues;
- (ix) Established automatic weather station, flood measurement and landslide measurement stations for Early Warning System;
- (x) Documented technical knowledge and project lessons for use in future initiatives; and
- (xi) Disseminate project experiences to policy makers and development planners in Timor-Leste.

3.1.1 Analysis of Logical Framework

The log-frame has a single development objective and 3 outcomes and 6 outputs. The extensive activities are also listed in full, complete with their own indicators. The objectives, components and outputs are clear and appropriate to the issues and were designed considering the timeframe of the project. The project utilised lessons from other projects (see in 3.1.3) and the capacity of executing/implementing agencies were considered while developing project activities (see 3.1.4 & 3.1.8). Project design sufficiently analysed potential risks and assumptions (see 3.1.2) related to the project which are well articulated in the PIF and PRODOC. Roles and responsibilities of the partners were made clear from the project design phase (see 3.1.8). The logical framework was revised during inception workshop on 29 October 2014 and some changes were made in few activities under some outputs to adjust to existing progress made in particular under the DRM-I and DRM-II projects. There has not been any change in the number of outputs and sub-outputs as well as activities from the original log frame.

The indicators of the log frame are relevant, precise and mostly SMART (Specific; Measurable; Achievable and attributable; Relevant and realistic; Time-bound, timely, tractable and targeted). All are based on sound scientific monitoring protocols using the most relevant measures for a given criteria.

3.1.2 Assumptions and Risks

There were thirteen risks identified in the project document. Of these, eleven are rated high and two medium. Three high risks has only 50% probability, seven has 75% probability, one high risk has high probability (100%) and other less probability. The high probable risk of high impact is possibility of inadequate quality of proposals from communities, which means no community-level interventions for DRM are accepted for funding. But to address this risk, project developed clear guidelines and provided trainings to increase the capacity of communities to develop quality proposals. Other risks were constraints to technical staffs and community leaders to attend training sessions, attendance may not translate into enhanced DRM, relevant ministries may not wish to adopt recommendations in policies, DDMCs/disaster focal points may be unable to produce the necessary materials to implement communitylevel interventions for DRM, rugged and inaccessible terrain may prevent effective instalment and operation of EWS, limited capacity may prevent early warning to disseminate or interpret for taking actions, communities may be unwilling to adopt new farming methods, community may not be willing to settle farming, new land-use methods may create a disproportionate burden to women, reforested common areas become a source of dispute for resources and community leaders may become unable to negotiate the equitable distribution of benefits, low uptake of knowledge and resilience i.e. not significantly improved in up taking knowledge and the need of women are not analysed and addressed and they may not benefit from the project interventions. All possible risks were identified and analysed thoroughly and mitigation measures were arranged to address the risks.

3.1.3 Lessons from other Relevant Projects incorporated into Project Design

This project was built on lessons learned from other initiatives with experience of inter alia permaculture, agro-forestry and conservation agriculture (MAF-FAO Conservation Farming Project, Asian Development Bank's Bio-engineering work and various NGOs such CARE, Oxfam, Permatil and RAEBIA) in Timor-Leste. The adaptation interventions proposed in this project have been designed as a package of complementary activities that: i) incorporate traditional and modern techniques for crop

farming; ii) require few inputs; and iii) respond to the anticipated effects of climate change on women, youth and other vulnerable groups of the society.

3.1.4 Planned Stakeholder Participation

The Ministry of Social Solidarity (MSS) is the lead partner agency, working closely with UNDP as the implementing entity. MSS coordinated with other line ministries, development partners, academic institutions, NGOs and member of potential target communities. These stakeholders were also involved in project development workshops, consultation sessions, bilateral working sessions, field trips, surveys and one to one meetings. Stakeholders planned to involve in different activities were NDMD, INAP, MSS, MSA, MPW, MCIE, MAF, MoF, MSS district directorates, NDIEACC, CARE International Timor-Leste, CVTL, NDOC, DDMC, DDOC, PNTL, IPG, ND Met, NDAR, NDES, RAIBEA and Na Terra. Detail roles and responsibilities of these stakeholders are explained in Table 6 of the Project Document. Unlike versioned at the project development phase, the coordination between Ministries and other government institutions at implementation of activities was not that good in the first half of the project. After appointment of the second CTA, some improvement was made but still there was some gap in intra-government coordination.

The main roles of the national level stakeholders are to ensure political and executive support for the activities, generate co-financing from potential agencies while local stakeholders were planned more involvement in planning and implementing activities and managing of natural resources and ecosystems. Some local leaders and community representatives, including women and youth, were trained and participated in the monitoring of environment, which helped to improve knowledge and awareness of the local communities in protection and conservation of the local ecosystem.

3.1.5. Replication Approach

The project demonstrated climate-resilient development that address priorities at the sub-national and local level while also informing national development plans and policies. This project has demonstrated good models such as capacity enhancement of national and local government and communities, policy review to mainstream DRM, awareness generation, reforestation, river control, landslide control, water and sanitation, irrigation, horticulture, agro-forestry, soil erosion control, establishment of automatic weather stations and arrangement of early warning system. Gathering evidence on the cost-effectiveness of DRM interventions facilitated policy and budgetary adjustments. The project is piloted a landscapebased approach to DRM to support the climate-resilience of road infrastructure in the DARDC. The project interventions have been designed to target disaster risks that are specific to Timor-Leste's socioeconomic and environmental context. The lessons learned will be useful for replicating the best practices in other parts of the country because Timor-Leste is a small country with the relatively uniform disaster risks throughout the country. The direct involvement of government institutions demonstrated the potential for integration of approaches and strategies proposed under this project into on-going planning processes. It is learned that government of Timor-Leste is interested to replicate the community grant programs to other areas in the same modality and due to their interest and priority Prime Minister and minister had plan to visit project sites from 8-10 May to have first-hand information on project.

3.1.6 UNDP Comparative Advantage

During the inception workshop, UNDP's project assurance role was presented and discussed in detail. The participants endorsed the assurance role described in the approved project document. Enhancement of capacities at the national and sub-national levels has been considered by UNDP to be essential for promoting disaster risk reduction. Accordingly, in line with the government's national priorities, support to enhance capacities and make evidence based planning in the fields of DRM was also a priority area.

The DARDC Project is deemed to be congruent with these priorities as elaborated in the Sustainable Development Goal where ensuring environment sustainability is the first priority programme areas for Timor-Leste; second, UNDAF priority for improved living conditions through environmental management for Sustainable Development, the third UNDP Country Program Action Plan and the fourth it also paves road to the Sub-regional Programme document for the Asia-Pacific Island Countries and Territories (2018-2022). The project is in line with the pillars of technical and financial assistance, which form the foundation to reduce risks of land degradation in the Dili to Ainaro road corridor. Specifically, the project will help realise four pillars identified by UNDP:

- Development of the capacity of the local population to adapt best practices on DRM;
- Establish knowledge base and assure access to information to encourage evidence based planning;
- Engagement of communities and local government and NGOs to reduce disaster risk and enhance resilience; and
- Networking with national and regional organisations working in the field of DRM.

UNDP has been working in the field of environment protection, disaster risk reduction, SLM, biodiversity conservation and sustainable use of natural resources for economic development and poverty alleviation. UNDP has a lot of experiences from these areas. The project has benefited from UNDP's experience during its development phase through to implementation. This project aimed to encourage national and local authorities and communities in adapting to climate induced threats, reduce vulnerability of life, property and infrastructures and improve rural economy, by enhancing their capacities for addressing climate change induced disasters and other impacts. UNDP has established early warning system in different countries to support farmers and pastoralists for reducing vulnerability to climate induced disasters. Similarly, experience from different counties on livelihood programs to improve adaptation to climate change risk was also utilised in this project. In addition, the project also aimed to establish early warning systems to promote informed decision making by farmers and local government.

3.1.7 Linkages between Project and other Interventions within the Sector

This project was linked with the two World Bank initiatives: i) The Road Climate Resilience Project (RCRP), which was initiated in 2011 to provide the GoTL financial and technical support for the construction of a climate-resilient national level road between Dili and Ainaro to improve connectivity and reduce the vulnerability of the road to climate-induced disasters. The interventions of this project were limited to the Rights-of-Way (RoW), which stretches 25m to either side of the road; ii) Building Climate and Disaster Resilience Project (BCDRP), which is to build climate and disaster resilience in communities along the Dili-Ainaro and linked road corridors. This project aimed to build capacities in relevant sub-districts along the road stretches relating to community-based DRM measures and to support capacity development of communities in the area to improve their capacity to plan and implement practical DRM interventions.

DARDC has similar objectives like those of World Bank projects to increase resilience of communities to climate-induced disasters and in addition DARDC has also components to strengthen capacity of the national and local DRM institutions/stakeholders, increase capacity for the local planning process and land use and the watershed approaches. Unlike the expectation, due to delay in implementation of this project there was limited complementary actions between these projects during the first half of the DARDC project while in the second half, the World Bank project was already ended.

As per the plan indicated in the project document, the findings (lessons learned) were distributed to many relevant audiences and will also be distributed to other GEF funded projects dealing with similar issues.

3.1.8 Management Arrangements

UNDP Direct Implementation Modality (DIM) was applied to ensure broad stakeholder participation and to create high flexibility and an enabling environment for innovation. The Ministry of Social Solidarity (MSS), the main partner agency which acts as the Lead Government Agency with overall responsibility for the project and reporting to UNDP Timor-Leste according to standard DIM procedures. MSS assigned the National Disaster Management Directorate (NDMD) to undertake day to day implementation activities inducing responsibility for the implementation of the project components 1 and 2. The Directorate for Forestry under the Ministry of Agriculture and Fisheries (MAF) is responsible for the implementation of activities under Outcome 3, which is the development of watershed management strategies and plans and the implementation of respective resilience measures.

The project is guided by the Project Board (PB), also called the Project steering Committee (PSC), which is chaired by the Minister of MSS and UNDP. PB is responsible for making management decisions for the project and provide support to address the issues encountered while implementing activities. The project had a Project Management Unit, which is headed by the Project Manager (Chief Technical Advisor) and had responsibility for the preparation of work plans, budgets, providing technical inputs and supervising implementation of activities to deliver project results. It also assured that required resources are committed and arbitrated on any conflicts within the project or negotiates a solution to any problems with the external bodies. The PSC approves the appointment and responsibilities of the CTA, the Annual Work Plan (AWPs) and Budgets, and any essential deviations from the original plans. Decisions made by the PSC are made in accordance to UNDP standards ensuring accountability for project results. PMU was located in the premise of NDMD building in Dili and was composed of CTA, National Project Coordinator, Finance and Administration Officer, Procurement and Administration Officer, Communication Officer, 2 Social/Community Mobilization Officers (based in Aileu and Ainaro), 2 Field Project Coordinator (based in Aileu and Ainaro) and 4 divers, including one based in each Aileu and Ainaro. The CTA was changed after 23 months of the project life.

MSS also appointed the Director of NDMD as a National Project Director (NPD) for facilitating the project implementation and monitoring and to ensure coherence between plans and priorities of all Ministries. The NPD provided strategic support as per need of the project, particularly to ensure strong engagement from key national and local stakeholders. The mission found the monitoring of the activities by the technical staffs from the respective institutions weak which was one of the reasons that the communities didn't receive timely feedback to address the problem. One of the serious issues of weak monitoring is related to automatic weather station, which is not in function for long time due to coverage by weeds and shrubs. No action from respective institution was taken to maintain weather stations until the TE mission informed this to the relevant directorates to fix the issues.

The project also has a Technical Working Group (TWG) consisting technical staffs from all Ministries, NGOs and the donors represented in PSC.

In the second half of the project, regular meetings were conducted to discuss progress and the constraints faced by the project except few cases like of weather stations. UNDP maintained quality technical and financial implementation of the project through its country office in Timor Leste. UNDP CO also assured activity implementation, monitoring and ensured proper use of GEF funds to assigned activities, timely reporting of implementation progress as well as undertaking of mandatory and non-mandatory evaluations. All services for the procurement of goods and services, and the recruitment of personnel were conducted in accordance with UNDP procedures, rules and regulations.

The Project's management and implementation focused on the revised log-frame throughout. The project team made an effort to raise awareness and developed capacity of stakeholders to provide a solid baseline of understanding of the project's main goals and activities. The roles and responsibilities of executing and implementing parties were made clear and negotiated prior to signing the project document. A

thorough review of relevant legislations was carried out to assure an enabling environment for the project implementation. Similarly, agreement on co-funding was made before signing the project document and staff, equipment and logistics arrangements were in place by the time of initiation of the project.

3.2 **Project Implementation**

Aileu, Ainaro, Ermera and Manufahi were selected by the project to implement policies, plans and investments that prevent soil degradation, maintain ecological integrity and support economic development of local communities.

3.2.1 Adaptive Management

The Project's adaptive management was good. The project was driven by the capable management team in the second half of the project, backed by good decision-making by the Project Steering Committee, support and advice from the UNDP-CO. Adaptive management has operated effectively in the second half at both the strategic and technical levels. The inter-ministerial and inter-governmental institutions coordination was poor in the first half of the project which affected implementation of the project activities. Second CTA improved coordination problem (though few gaps still remained) and also improved pace of project implementation. There was also confusion among the staffs and implementing partners which was resolved latter and that also helped to improve the implementation of various activates of the project.

In inception workshop, no major change was made in the project design and no new outputs were added but only few activities were changed under some outputs to adjust to existing progress made in particular under the DRM-I and DRM-II projects (for detail see page 19-20 of Inception report). Adoption of inception report recommendations is described under the heading "Feedback from M&E activities used for adaptive management".

The project had not conducted baseline study on biophysical and socio-economic situation. It has plan to monitor impact of the intervention within the remaining months of the project. The project was designed to pilot in vulnerable municipalities based on the recommendation of the vulnerability assessments. Project utilised lessons from the earlier projects in this sector and also from the ongoing project to strengthen the project implementation and management. The issues recommended in PIR and MTR were responded positively.

3.2.2 Partnership Arrangements

Project involved wide range of stakeholders during project design to implementation. This helped to bring ground situation information and information in needs at the local level. Agreements were signed with the major partners at the project design phase. Three agreements were signed between the project and the responsible parties implementing project activities. The project signed a Memorandum of Understanding with MSS to support some costs of providing technical support and oversight to the implementation of a EWS in the Dili-Ainaro road corridor. A budget of about USD 15,000 was part of this agreement.

A Letter of Agreement (LOA) was also signed between MSA and UNDP to transfer the budget portion of the LDCF grant to MSA for the Top-Up Grant mechanism. The overall agreement is about piloting the grant mechanism to demonstrate its feasibility by integrating DRM/DRR and climate change adaptation into the annual municipal planning and budgeting system in the four municipalities targeted by the project. Activities include the prioritization and approval of community priority projects, the procurement process following the PDIM procedures to contract the local communities, and to oversight and supervise the implementation of these projects. The total budget allocated to this agreement is about US\$400,000.

A Letter of Agreement (LOA) was signed between UNDP and MAF to transfer the budget portion of the LDCF grant to MAF to implement the climate resilience measures focusing on agroforestry, reforestation and watershed management activities in order to reduce the impact of climate change induced disasters related to floods, landslides and droughts. Activities include the establishment of tree nurseries, agroforestry, plantations and reforestation, terracing, building of check dams and dewponds as well as construction of organic composts. The total budget allocated to this agreement is about USD 391,000.

UNDP was the implementing agency of the project. UNDP has been playing important role in the communities for the project implementation at the local level. The project reached a wider audience through awareness raising campaigns such as disaster prevention sign posts, media coverage, web-pages of UNDP and the Ministry of Social Solidarity. The project activities were implemented through the active participation of the local communities. The TEC found that stakeholder engagement and participatory approaches have been of good order throughout.

The project has worked closely with many stakeholders throughout and the active engagement of stakeholders in project design to implementation has been vital to fulfilling its achievements and also address their needs, hence <u>stakeholder participation is evaluated as **Highly Satisfactory**.</u>

3.2.3 Gender

Women and children are the ones who are most vulnerable to land & water degradation, reduction in food production and climate change. As women are the ones who are involved in food production to preparation and collection of wood for cooking and water for drinking, they are highly vulnerable to drought, soil degradation and deforestation etc. The project therefore made efforts to include women in all activities to enhance their knowledge and capacity, build leadership capacity, improve their economic situation, increase food production and decrease drudgery. The project provided practical knowledge to address land degradation and promote sustainable land management.

A gender assessment and situation analysis has also been completed and a gender policy has been drafted. The project has also developed community driven and gender-focused Community Action Plans that prioritized measures to reduce the risks and vulnerabilities identified in CVCAs. Considering gender mainstreaming to include increasing equity regarding access to and control over production resources, equity in sharing benefits and reducing inequities in gender distribution of labour, this project significantly contributed to increasing equity at the community level. Both women and men benefited from the activities of the project. Women were also highly represented in the community groups formed with the support from the project and several of them were also led by women. Through support to CBOs, both women and men's capacity to manage their own groups was built. Climate resilient water supply projects have greatly contributed to reduce women's workload. About 7,800 (49.7% of total population and nearly 50% of female population) women have been directly benefitted from the water supply projects. Similarly, watershed, irrigation and bridge projects also contributed to enhance the project environmental and resilience outcomes.

3.2.4 Feedback from M&E Activities used for Adaptive Management

The project's adaptive management has been good in the second half of the project. None of the PIR has raised any issue or provided feedback on the program implementation in the first half of the project hence feedback mechanism was weak. The Inception workshop clarified roles and responsibilities of all stakeholders and the project was implemented accordingly but inter-government agencies coordination was weak in the first half of the project, which was improved (still few gaps remained) in the second half of the project that accelerated the implementation of the project activities. The implementation was monitored by the municipality authorities regularly and by the project management unit and partner

agencies. The feedback from the monitoring was adopted to improve the implementation process. Only weakness was observed in case of Early Warning System in which equipment stopped functioning three months after instalment due to lack of monitoring by the meteorology department as it was already handed over to them and was their responsibility. They should have immediately informed to the Indonesian company that were given responsibility of establishing instrument and as per the agreement, it was their responsibility to repair the system and to train staffs of the Meteorology department. If it was a problem with the equipment then the supplier company should have been reached as they have provided two years warranty. Project utilised lessons from the earlier projects in this sector and also from the ongoing project to strengthen the project implementation and management (see 1.1.3). The issues recommended in PIR and MTR were responded positively.

3.2.5 Project Finance

The total project cost as per project document was US\$42,616,780 which includes US\$5,250,000 in cash and US\$37,366,780 in kind. Of these, the GEF contribution was expected to be US\$5,250,000 in cash, UNDP contribution US\$650,000 in kind, and Government of Timor Leste's (GoTL) contribution US\$13,026,780 in kind and other partners contribution US\$23,690,000 in kind. Co-financing was well planned and clearly mentioned in the project document. There was no difference between committed contribution and actual contribution from the GEF but contribution from UNDP was slightly less than committed. The committed amount of Government of Timor Leste was US\$13,026,780 while the actual contribution was only 1,209,667.18 i.e. 2.1% of the committed amount was contributed. Similarly, committed amount of partners was US\$23,690,000 but actual figure was not available. The executing and implementing agencies made close monitoring of financial transactions (mainly GEF money) and program implementation and materialised the fund for activities by changing mode of payment and this helped to accomplish the activities much faster than during the initial years. But they were not able to track co-finances as less contribution from UNDP and no contribution other partners were observed.

- Project management cost was proposed at US\$250,000 and primarily funded by GEF and actual contribution from GEF for management was same as proposed but kind contribution made by the government of the Timor Leste for management was less then committed (only 2.1% of the committed amount) while of other partners was not observed. As per agreement GEF contribution was 0.7% of the management cost while GoTL contribution 35.2% and other partner 64.1% in kind for the management cost. But only some management contribution was available from GoTL and very less from UNDP but not from other partner so GEF has to bear all management cost.
- Project management costs (GEF cash) comprised about 4.5% of the total cash spend. Original closing date of the project was October 2018 but due to delay in initial years and slow implementation in the beginning, the closing date was changed to October 2019 but this has not increased management cost.
- The project was to be co-financed by the UNDP, GoTL and Other Partners. The final GEF co-finance ratio was 1:7 (US\$5,250,000 (GEF)) to US\$37,366,780 (UNDP+GoTL+ Other Partners), This is good result at project development phase as GEF requirement is at least 1:1 ratio; But co-finances were not available as per their commitments.
- Allocation on Component 1, 2 and 3 (US\$ 922,084, US\$1,832,206 and US\$289,732) accounted for 14.2%, 28.2%, and 53.2% of the total allocation respectively, while management costs (US\$289,732 i.e. 5.5%) was not higher than any components 1, 2, 3.
- GEF funding was distributed among all four components while UNDP kind contribution was only allocated to component 4 (Table 2). GoTL support was through in-kind contribution while UNDP and others contributors was for implementation of project activities. Of the total GEF fund, 14.2% was spent on component 1, 28.2% on component 2, 53.2% on component 3 and 4.5% on component 4. UNDP contribution was only for project management.

Component	GEF			UNDP			Govt. of Timor-Leste (In-Kind)			Other Partners (In-Kind)			Total		
F	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budgeted	Actual	%
Component 1	922,084.00	996,603.53	108%				4,000	79,863.00	1997%	-	-				
Component 2	1,832,206.00	1,069,700.29	58%	(50.000	520 011 (1	970/	135,000.00	12,067.00	9%	-	-				
Component 3	3,461,568.00	2,244,147.4	65%	650,000	539,011.61	83%	364,729.00	55,131.00	15%	-	-				
ME & PMU	289,732.00	233,373.70	81%				-	729.00	-	-	-				
Total	6,505,589.00	4,456,210.10	68%	650,000	539,011.61	83%	13,026,780	1,209,667.18	9%	23,690,000	Not available		43,872,369	6,204,888.89	14%

Table 2: Total disbursement of funds by output (to end April 2019) (US\$) against full project budget as per Project Document.

Source: UNDP MCO & PMU

Analysis of budgeted and actual expenditure shows a big difference in all components. Similarly, it is also observed that in component 1 of GEF expenses it exceeded budgeted amount while in other components expenses was below budgeted amount (Table 2 and 3). In the initial years, delay in recruitment of staffs and other procurement processes affected program implementation and due to that some of the expenses could not be made on the specific component for the prescribed year while in the following years, program implementation accelerated and the expenses covered some of the previous year's pending activities also. The planned management cost as per project document was US\$250,000 and actual management cost was US\$239,367. There are still six months left for the project so the balance management budget will be utilised within these months and management cost will not exceed the provisioned amount.

Tables 3-4 show the disbursement of GEF fund and GoTL contributions and table 5 show UNDP contribution. Breakdown of Budgeted amount of the GoTL and development partners was not available but it was learned that GoTL contributed in kind i.e. manpower, office space, land etc. Likewise, partner's contribution was not available and also partner project ended earlier than this so this project could not benefited much from the partners. UNDP contribution was in kind and was picked in 2015 for component 1. UNDP contribution was not budgeted for component 3 and management in year 2014, 2015 and for years from 2017 there is no provision of budget from UNDP and no expense also. There was no budget for component 1, 2, 3 from the year 2016 but some expenses was made in 2016 (Table 5).

Personnel from all line ministries and departments involved in this project, municipalities, NGOs, community based organisations and community members were found satisfied with some reservations (had expectations for more financial supports for other areas too) and they were advocating achievement of the project. Ministry officials, municipalities, UNDP CO and local communities also expressed commitment to continue support to the project activities. Similarly, they also noted that the ministry has already initiated communication with the UNDP CO to develop project to upscale in new areas in the same modalities.

Total disbursement of GEF funds (US\$) by Component by year against budget as TABLE 3: per Project Document (till April 2019)

<i>a</i>		2014			2015			2016		2017		
Component	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%	Budget	Actual	%
		47 212 02	304.05			105.44			84.15			100.10
Component 1	15,561.00	47,515.05		298,644.00	31,4884.99		245,147.00	206,285.38		257,459.00	257,722.75	
			0			39.29			27.86			61.68
Component 2	22,000.00	0		101,481.00	39,868.62		375,891.00	104,732.76		723,808.00	446,450.16	
			492			36.98			58.85			62.61
Component 3	18,000.00	885,00		386,469.00	14,2903.26		792,803.00	466,584.77		1,119,991.00	701,276.70	
			149.09			147.74			46.55			73.31
ME & PMU	15,000.00	22,363.13		29,799.00	44,023.79		62,287.00	28,992.95		117,552.00	86,179.33	
			100			66.35			54.64			67.23
TOTAL	70,561.00	70,561.00		816,393.00	541,681.00		1,476,128.00	806,595.86		2,218,809.00	1,491,628.94	

Table 3: continue...

	2018			2019		Total				
Budgeted	Actual	%	Budgeted	Actual	%	Budgeted	Actual	%		
101,273.00	112,291.13	110.88	4,000	58,106.25	1452.66	922,084.00	996,603.53	108.08		
474,026.00	472,435.35	99.66	135,000	6,213.40	4.60	1,832,206.00	1,069,700.29	58.38		
794,305.00	798,812.25	100.57	350,000	46,070.42	13.16	3,461,568.00	2,244,147.4	64.83		
50,365.00	51,085.02	101.43	14,729.00	729.48	4.95	289,732.00	233,373.70	80.55		
1,419,969.00	1,434,623.75	101.03	503,729.00	111,119.55	22.06	6,505,589.00	4,456,210.10	68.50		

SOURCE: UNDP MCO

TABLE 4: Total disbursement of National Government of Timor-Leste (US\$)

a		2014			2015			2016		2017			
Component	Budget	Actual	%	Budg	get Actual	%	Budget	Actual	%	Budget	Actual	%	
Component 1		9000			51300			24000			24000		
Component 2		-			27300			27300			27300		
Component 3		-			27300			563,724			86447.31		
ME & PMU		-			105,900			52493			52493		
TOTAL		9000			105,900			671,093.70			190,551.78		
Component		2018				2	2019			Total			
	Budge	t Ac	tual	% Budget			Actual	%	Budget		Actual	%	
Component 1			24000				16000				148300		
Component 2			27300				27300				136,500		
Component 3		54	927.30				27300				759,698.61		
ME & PMU		28	994.40				27300				267,180.40		
TOTAL		135,	221.70				97900		13,0	026,780	1,209,667.18	2.1%	

Source: PMU

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Compo	Component 2014							2015					2016		
-	Budget Actual %		Budget Actual			1	%	B	udget	Actual	%				
Compo	nent 1	290,450.0)0	297,354.56	102.4	112,70	112,706.00		141,676.09		0		25,692.66		
Compo	nent 2	0		1,200.00		10,200	.00	27	70.00	2.65	0		(2,478.60)		
Compo	nent 3	11900		7,868.09	66.1	31,239	.00	6,43	9.00	20.6	0		4,935.00		
ME & F	PMU	0		6,072.79			-	42,54	6.22		25	5,500.00	(2,478.60)	9.72	
TOTAI	L	302,350.0)0	312,495.44	103.4	154,145.00		190,931.31 12		123.9	25,500.00		25,670.46	100.7	
	2017			2018		2019						Total			
	Bud	Actual	%	Budgeted	Actual	%	Bud	geted	Actu	al (%	Budgeted	Actual	%	
	get														
1.	0	0		0	0		-		-			403,156	464,723.31	115.3	
2	0	0		0	-		-		-			10,200	3948.6	38.7	
3	0	0		0	-	-		-				43139	19242.09	44.6	
4	0	0		0	-	-		-				25500	51097.61	200.4	
Total	0	0		0	-		-	-				481,995	539011.61	111.8	

Table 5: Total disbursement of UNDP CO (US\$)

Note: The budgeted amount provided by UNDP in this table is less than committed amount of US\$650,000.

Table 3 shows the actual funds spent for each component by year for the GEF funds. These show clearly that the management cost exceeded budgeted amount in the year 2014, 2015 and 2018 while in the year 2016 and 2017 less than budgeted and in 2019 it is less but there are still six months left to end the project. Component 1, funded by GEF, peaked disbursement in 2015 and Component 2 in 2018. Component 3 funding by GEF peaked disbursement in 2018 and component 4 peaked in the year 2017. The Government contribution was in kind and was provided in the form of office space, senior officials' time and other support staffs, electricity, water, land for some project activities etc. Similarly, breakdown of budgeted amount of partners was not available so could not compare with the actual expenses for each year. All the expenses correspond to the work accomplishment in respective years.

At all times, the chair of the Project Steering Committee, Minister for Social Solidarity has been kept abreast on the project's progress through good reporting and this has allowed the necessary budget revisions to be made on a sound basis. Similarly, the link between Implementing Ministry and the UNDP-CO has been efficient in ensuring that budget replenishments have been timely and there will not be inherent procedural delay in the second half of the project.

Co- financing (type/sour	UNDP (US\$)		GEF (US\$)		Govt. of ' Leste (US\$)	Timor-	Other Pa	rtners	Total (US\$)		
ce)	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual	
Grants			5,250,000	5,154,458.61					5250000	5,154,458.61	
In-kind support	650,000	539,011.61			13,026,780	1,209,667.18	23,690,000	0	37,366,780	1748678.79	
Totals	650,000	539,011.61	5,250,000	5,154,458.61	13,026,780	1,209,667.18	23,690,000	0	42,616,780	6903137.40	

Table 6: Co-financing of the project.

Source: UNDP CO & PMU

3.2.6 Monitoring and Evaluation: Design at Entry and Implementation

M&E Design

The project design included good monitoring and evaluation (M&E) plan, which is comprehensive in its depth and scope. The project had a log-frame to monitor achievement with clear objectives, components and appropriate to the issues, which was designed considering the timeframe of the project. A detailed socioeconomic survey was not conducted following the standard scientific methods to identify the most vulnerable sites and to assess socio-economic status of the project sites. Project sites were developed based on the information from the other projects. Roles and responsibilities of the partners were made clear from the project design phase. The indicators of the log-frame were all Specific; Measurable; Attributable; Relevant, Achievable Realistic or Time-bound. At the stage of the inception, clarifications and updates were made to the M & E plan but no major change was made. All activities were listed and explained, and a table was included determining responsibilities, budgets and timeframe for each. M&E budget was set realistically with a total proposed amount of USD112,000 (One Hundred and Twelve Thousand) for M&E activities. Actual management cost (in cash) was US\$233,373.7 and this indicates that allocated budget for M&E was appropriate and also expenses for M&E is realistic and unable to use all M&E budget coincides with weak monitoring. Baselines were already set in the Project Document except detail socio-economic information. The inclusions of indicators for each activity were not only appropriate and useful for evaluation but also good for management purposes.

The design of M&E included fully itemised and costed plan in the Project Document covering all the various M&E steps including the allocation of responsibilities; but provision for monitoring of technical aspects and feedback mechanisms was weak. Targets were realistic for the time frame, hence <u>monitoring</u> and evaluation design has been evaluated as **Highly Satisfactory**.

M&E Implementation

Monitoring and evaluation of project activities has been undertaken in varying detail at three levels:

- i. Progress monitoring
- ii. Internal activity monitoring
- iii. Impact monitoring

Progress monitoring has been good and was being done through quarterly and annual reporting to the UNDP-CO. The annual work plans have been developed at the end of each year with inputs from the Project staff and the UNDP-CO. The annual work plans were then submitted for endorsement by the Project Steering Committee, and subsequently sent to UNDP for formal approval. The implementing team has also been largely in regular communication with the UNDP-CO regarding progress, the work plan, and its implementation. The indicators from the logframe were used in measuring progress and performance. The project management has also ensured that the UNDP-CO received quarterly progress reports providing updates on the status of the planned activities, the status of the overall project schedule, deliverables completed, and an outline of the activities planned for the following quarter. The reports' format contained quantitative estimates of the project progress based on the financial disbursements. The UNDP-CO generated its own quarterly financial reports from Atlas. These expenditure records, together with Atlas disbursement records of any direct payments, served as a basis for expenditure monitoring and budget revisions, the latter taking place bi-annually following the disbursement progress. Monitoring of activities by respective government department was weak which affected feedback mechanism resulting delay in repairing and cleaning automatic weather stations. The shrubs has covered solar panels which affected charging of the battery that runs machine. Machines have warranty of two years and installing agency also have condition of repairing of equipment for some years. But due to lack of monitoring and also lack of initiation by the responsible institution (as it already handed over to respective institutions), the company has not been informed to repair.

From the quarterly reports, the UNDP-CO has prepared Quarterly Operational Reports which have been forwarded to UNDP/GEF Regional Coordination Unit, and also uploaded all the information in ATLAS. The major findings and observations of all these reports have been given in an annual report covering the period July to June, the Project Implementation Review (PIR), which is also submitted by the Project Team to the UNDP-CO, UNDP Regional Coordination Unit, and UNDP HQ for review and official comments, followed by final submission to the GEF. All key reports were presented to the Project Steering Committee members ahead of their half-yearly meetings and through these means, the key national ministries and the national government have been kept abreast of the project's implementation progress. The steering committee meetings were not taking place as per plan in the early part of the project but was improved in the second half of the project.

The Project Management Office (PMU) and the UNDP-CO have maintained a close working relationship, with the project staff members through meetings and formal and informal discussion on almost daily basis to discuss implementation issues and problems.

The project's <u>risk assessment</u> has been updated quarterly by the UNDP-CO with the main risks identified along with adequate management responses and person responsible (termed the risk "owner"), who in most cases differs from the person who identified the risk.

MTR took place in August 2017 which outlined drawbacks and provided recommendations for improvement. The project management responded positively to the recommendation which helped to improve the status of the project.

<u>Internal activity monitoring</u> undertaken by UNDP CO, the Ministry of Social Solidarity (MSS) and the Project Manager (CTA) appears to have been good in comprising a range of mechanisms to keep informed of the situation and to respond quickly and effectively to any areas of concern. These comprised many of the methods used to track progress (reporting from the field, field visits from different levels etc.), and implementation has been guided by the Annual Work Plan and the quarterly plans submitted to release funds. Generally the project area is small and therefore it is not required to have a formalised communication or monitoring procedures as members being in almost daily contact.

Impact monitoring was not provisioned in the project document but is recommended by the Mid-term Review and is planned to conduct close to the end of the project. There was room for improvement on the technical aspects of some of the activities to make them more cost effective and sustainable. The EWS equipment stopped functioning after 3 months of installation but it was neither noticed by the Project management nor reported by the Meteorology Department who had responsibility of its management. Due to this, weather information was not available for long time and also no initiation was taken to repair them.

M&E implementation has been moderately satisfactory, with progress monitoring and internal activity monitoring. Monitoring from government institutions was weak. Monitoring of function of EWS equipment was lacking. Responses have been made to the risk assessments (though some room for improvement in technical aspects of the activities remains) and the TECs considers it to be "good practice", hence the implementation of monitoring and evaluation has been evaluated as **Moderately Satisfactory**.

3.2.7 UNDP and Implementing Partners Implementation / Execution, Coordination and Operational Issues

Project Oversight

The project was initially implemented following NIM modality and later changed to Direct Implementing Modality (DIM) to ensure broad stakeholder participation and to create both flexibility and an enabling environment for innovation. UNDP executed the project in close collaboration with the Ministry of Social Solidarity. There was very good communication and coordination between implementing and executing agencies. Regular meetings were conducted to discuss progress and constraints of the project. UNDP had ensured high-quality technical and financial implementation of the project through its local office in Timor-Leste. UNDP CO was responsible for monitoring and ensuring proper use of GEF funds, timely reporting of implementation progress as well as undertaking of mandatory and non-mandatory evaluations. All services for the procurement of goods and services, and the recruitment of personnel were conducted in accordance with UNDP procedures, rules and regulations. The project Management Unit was formed to coordinate and manage project activities and it facilitated the achievement of targeted results on time, adequate and appropriate management practices, program planning and proper implementation and timely reporting. PMU has a Chief Technical Advisor cum Manager, Admin and Finance Officer and support staffs (driver and office helper). A risk management strategy was developed involving all partners and experts through detailed analysis of issues and was effectively implemented. Directorate of Disaster Management provided office spaces and also nominated the Project Steering Committee members representing all line ministries, local government heads from the project Municipalities. The project hired qualified experts to conduct studies but technical aspects of early warning system and water supply in some places was very weak. The weather equipment stopped functioning after three months of instalment and it was not noticed by the management and Meteorology Department to whom these stations were handed over. Instalment of flood and landslide monitoring equipment were delayed and were not completed by the time of TE. Training to local level institutions on utilisation of the EWS information was also due till the date of TE.

The capacity of the local government and community groups was enhanced for strengthening performance. From project development to implementation, lead implementing ministry, other ministries and local government institutions were involved on behalf of Government of Timor-Leste and this assures government ownership in the project.

The Project has been planned and managed (except delay in the beginning) providing products of good quality and within budget, while responding effectively to several internal and external challenges through good adaptive management. Some inter-government institution communication gap still exists. Hence the implementation approach has been evaluated as **Satisfactory**.

UNDP Supervision and Backstopping

UNDP supervision was accomplished through standard procedures and undertaken competently. Terminal Evaluator received no complaints from interviewees about excessive UNDP bureaucracy or delays in procurement, and UNDP's heavy requirements for reporting.

Key aspects of supervision were made through UNDP's involvement in communication with the Ministry of Social Solidarity and other stakeholders. Members of the Energy and Environment Cluster of UNDP CO were heavily involved in regular issues such as the review and approval of work plans and budgets, review of progress and performance against such work plans, and completion of the tracking tools. It appears that the CO was helpful and supportive throughout the implementation period, responding adequately to provide good guidance, honest and constructive criticism, and help to overcome particular problems as necessary. UNDP support was focused towards achieving targeted results and support was appropriate and timely and the project staffs were satisfied by the quality of UNDP support. But in the first half of the project, implementation was weak due to poor monitoring and evaluation, and feedback was not available to address the root causes of delay. In the second half the project, coordination between government agencies were improved (still few gap exists) and this helped to improve activities implementation. If regular monitoring was carried out by arranging a technical staff at the CO in Timor-Leste then that would have helped to identify weaknesses and bring it to notice of PMU and relevant government department. Annual planning was delayed in the first half but was improved in the second half and done on time with active participation of stakeholders. Similarly, risk management options were identified in close consultation of partners and experts and the project was able to manage risk efficiently. The project was slow in the beginning due to delays in recruitment of staffs, office setup and procurement of equipment. Due to initial delays, there were time constraints at the end of the project to accomplish or initiate all tasks, so a no-cost extension was approved until October 2019.

UNDP has provided supervision and backstopping to the project, and its performance has benefitted as a direct result, hence <u>UNDP's supervision and backstopping role is evaluated as **Satisfactory**.</u>

3.3 **Project Results**

3.3.1 Overall Results

Objective Indicators

A single "Project Goal" and single "Project Objective" was articulated in the log-frame with a development objective. The project objective is to protect critical economic infrastructure for sustained human development from climate induced natural hazards through better policies, strengthened local DRM institutions and investments in risk reduction measures within the Dili to Ainaro development corridor. The project aims to achieve its stated objective through three outcomes. Full details and an evaluation of achievements against targets are provided in table 7. Project was able to accomplish most of the targeted activities and only few were incomplete but expected to complete in remaining six months of the project. The TECs believes this to be a good performance.

Attainment of Objectives:

The project contributed to reducing disaster risks of Dili-Ainaro road corridor areas by addressing policy gaps, enhancing capacity of the national, sub-national government and the community based institutions, generating

awareness among community members from the project areas, establishing information base and supporting evidence based planning with the establishment of an information database and facilitating access to them.

The project results were measured against achievement indicators guided by the evaluation questions (Annex IV). The DARDC Project has been well designed, but some problems were observed in its management and implementation in the beginning but was improved later and have achieved most of its targeted activities. The project team has managed to deliver a series of interventions that have reduced the threats of Dili-Ainaro corridor and contributed to the improved livelihoods of local communities from the project districts of Timor-Leste. DARDC project assessed capacity of NDMD (MSS), DoF (MAF), MSA and MCIE and developed and conducted training for capacity enhancement. The project also developed organizational strategy to strengthen INAP's capacity. It has updated and widened the extent of portfolio of training modules to include aspects that are not sufficiently covered within the current portfolio and both CBDRM and DRM manuals have been approved by the government. Similarly, DRM and CBDRM trainings were also conducted at national and district levels benefiting 250 government officials and 200 local members respectively.

The Project developed an organizational strategy for a national disaster database to coordinate the knowledge management of NDMD (under UNDP-SDRM), NDIEACC (for UNDP-SSRI) and the national Climate Change Center. It also developed and disseminated knowledge and awareness products documenting good practices for DRM from the national and the international project/initiatives. NDRM policy was revised to integrate Sendai Framework for DRR and climate change adaptation and submitted to the government for approval. Capacity assessment of NDMD, NDIEACC, MAF and other DRM stakeholders to identify institutional and organizational capacity gaps was conducted. The project developed a gender strategy document to recommend sector policies, plans and strategies on gender describing institutional, implementation modalities and function. Policy briefs were produced and disseminated to government staffs of line ministries and institutions.

A top-up grant mechanism for local DRM institutions and the local administrations was developed to increase financial support for disaster prevention and preparedness activities as well as general resilience measures. To manage the top-up grant, guidelines and operational manuals were developed. The project also supported establishment of women's group in each suco/aldeia with DRM funding and the women groups are actively involved in implementing community action plan. To facilitate identification of activities, a list of activities for intervention and preparedness were developed. Communities were sensitized through several training sessions and were also involved in the participatory community vulnerability capacity assessments. The community driven and gender-focused community action plans were also developed focusing measures to reduce the risks and vulnerabilities identified in CVCAs.

The Project assessed status of existing early warning and response system to identify the best practices, traditional knowledge, gender considerations and capacity gaps. Based on these information, a model and SOPs for EWS was developed through stakeholder consultation and expert analysis. Project also conducted awareness and training campaigns on EWS. However, training for communities to use information from EWS for decision making to protect lives, property, agricultural resources and infrastructures from climate induced disasters is remained to complete. Six automatic weather stations were installed which are handed over to relevant government department for future management. Project has also procured equipment for landslide monitoring and flood monitoring to be installed in two places and is close to completion.

Existing data from the WB-BCDRP, UNDP-SDRM and MAF-ALGIS as well as remote sensing imagery were collated to develop a GIS-based database of geographical, geological and land use characteristics of the DARDC. The GIS-based data were integrated with the CVCAs and CAPs to develop watershed hazard and risk maps identifying risk areas posing a threat to road infrastructure as well as economic and livelihood assets. The project also provided support to the MAF to integrate the watershed management plans at the local level into the Strategic District Plans and the PDID process.

The watershed management plan was developed to address the vulnerabilities of road infrastructure as well as the local communities in the DARDC. The project conducted plantation work on the steep areas using fukuoka-style seedballs and bamboo seedlings to rehabilitate larger vulnerable slopes previously damaged by slash and burn agriculture, erosion and other forms of ecosystem degradation. 220,000 seedballs were
prepared and disseminated for reforestation. Various awareness materials were produced and disseminated to wider audiences for promoting public awareness on watershed management approaches to reduce hazards posed by climate induced disasters.

Overall, the project has achieved most of its major global and local environmental objectives, and yielded substantial global environmental benefits, with minor shortcomings. The project can be presented as "good practice", and hence its attainment of objectives and results is evaluated as Satisfactory.

A Summary of the Project's achievements is given below, followed by an outline of the attainment of objectives. This is followed by a Review of Outcomes to Impacts in Table 8 and a brief discussion on the verifiable impacts. A summary evaluation of Project Outputs is given in Table 9 and description of achievement is provided after table 7. A detailed evaluation of the level of achievements made against the indicators of success contained in the log frame is given in Table 7.

Objective / Outcome	Indicator	Baseline	Target as per ProDoc	Achievement as of May 2019
Objective: To protect critical economic infrastructure for sustained human development from climate induced natural hazards though better policies, strengthened local DRM institutions and investments in risk reduction measures within the Dili to Alnaro development corridor.	1. No of target institutions with increased capacity for climate and disaster risk management planning, budgeting and delivery at the national and sub- national level.	1. Capacity for climate and disaster risk planning, budgeting and delivery at the national and sub- national level is limited (Level 2: Anecdotal evidence of capacity)	 MSS, NDMD, DDMCs have capacity for climate and disaster risk management planning budgeting and delivery at the national and sub-national (at least level 4: Widespread, but not comprehensive, evidence of capacity). 	 DARDC project developed and conducted training for capacity enhancement. The project also developed an organizational strategy for a national disaster database to coordinate the knowledge management of NDMD (under UNDP-SDRM), NDIEACC (for UNDP-SSRI) and the national Climate Change Center. NDRM policy revised to integrate climate change adaptation and submitted to the government for approval. The project also developed a gender strategy document to recommend sector policies, plans and strategies on gender describing institutional, implementation modalities and function. Policy briefs were produced and disseminated to government staffs of line ministries and institutions. The community driven and gender-focused community action plans were developed focusing measures to reduce the risks and vulnerabilities identified in CVCAs. Six automatic weather stations were installed, which are handed over to relevant government department for future management. Training for community leaders and local government to utilise weather information will be conducted in the remaining time of the project. The watershed management plan was developed to address the vulnerabilities of road infrastructure as well as local communities in the DARDC. The project conducted plantation work on the steep areas using fukuoka-style seedballs to rehabilitate larger vulnerable slopes previously damaged by slash and burn agriculture, erosion and other forms of ecosystem degradation.
Outcome 1: Knowledg understood and availab	ge and understanding oble to policy makers, p	anners and technical staff	nduced disasters enhanced, and conseq	uent impacts on economic infrastructure better

Table 7: Summary Evaluation of Project Achievements by Objectives and Outcomes

Objective / Outcome	Indicator	Baseline	Target as per ProDoc	Achievement as of May 2019
Output 1.1: National training facility established, providing services for at least 200 district officials,	 No of targeted institutions with increased adaptive capacity to reduce risks of and response to climate variability. No of staffs trained on technical CCA and DRM themes, disaggregated by gender. 	-MSS, NDMD, DDMCs and other institutions have limited capacity to reduce risks and respond to climate variability. -Few staff and community leaders have received comprehensive technical training on CCA and DRM themes	-MSS, NDMDs, DDMCs, MAF and other institutions have increased adaptive capacity to reduce risks and respond to climate variability. -200 staff and community leaders have received technical training on CCA and DRM themes with at least benefitting 50% women.	 Assessed capacity of NDMD (MSS), DoF (MAF), MSA and MCIE for developing and presenting training on DRM and Climate Change adaptation. Organizational strategy developed to strengthen INAP's capacity for delivering training on DRM and Climate Change adaptation. Updated and widened extent of the portfolio of training modules to include aspects that are not sufficiently covered within the current portfolio and both CBDRM and DRM manuals are finalized and approved by the government. Similarly, a comprehensive needs assessment for DRM training was also conducted. DRM training on DRM was conducted to national and district officials benefiting 250 government officials and 200 local members trained on CBDRM. Developed an organizational strategy for a national disaster database to coordinate the knowledge management of NDMD (under UNDP-SDRM), NDIEACC (for UNDP-SSRI) and the national Climate Change Center. Also developed and disseminated knowledge and awareness products documenting good practices for DRM from the national and international project/initiatives. These materials are also available online.
Output 1.2: National DRM policy and institutional roles extended to address climate change and disaster risk reduction measures, including assessment methods, institutional and implementation	-Type and no of recommendations to sector policies, strategies and plans for climate change adaptation and DRM that specifically address needs of women	-Sector policies, strategies and plans do not explicitly include climate change adaptation and DRM. Sector policies, strategies and plans do not specifically address the needs of women concerning climate	 -Recommendations for at least 3 sector policies, strategies and plans that explicitly include climate change adaptation and DRM. -Recommendation for at least 3 sector policies, strategies and plans specifically address the needs of women concerning climate change adaptation and DRM. 	 NDRM policy revised to integrate Sendai Framework for DRR and climate change adaptation and submitted to the government for approval. Capacity assessment of NDMD, NDIEACC, MAF and other DRM stakeholders to identify institutional and organizational capacity gaps was conducted. A gender strategy was developed to recommend sectoral policies, plans and strategies on gender describing institutional, implementation modalities and function.

Objective / Outcome	Indicator	Baseline	Target as per ProDoc	Achievement as of May 2019		
modalities, functional		change adaptation and		• 3 policy briefs on Top Up grant Mechanism,		
capacities and M&F		DKIVI.		produced and disseminated to government staffs of line		
system.				ministries and institutions.		
Outcome 2: Subnation	al DRM institutions al	ble to assess, plan, budget	and deliver investments in climate char	ge related disaster prevention, linked to critical		
economic infrastructur	e and assets in the Dili	to Ainaro development co	orridor.			
Output 2.1:	-Increased in	-Few measures for	Full expenditure of additional funds	• A top-up grant system for local DRM institutions		
Capacities of district	amount of funds	community-level	(\$50,000 per district per annum) on	and local administrations was developed to increase		
and sub-district	delivered on	disaster mitigation are	measures for community-level	financial support for disaster prevention and		
Disaster Management	climate risk	currently implemented	climate risk reduction implemented	preparedness activities as well as general resilience		
Committees and	reduction measures	through	through DDMCs/district disaster	measures.		
District Disaster	at the sub-	DDMCS/District	focal points.	• Guidelines and operational manuals for the top-up		
operation Centres		Disaster Focal Points.		grant system was developed to deriver disaster		
budget and deliver				• Support provided to establish women's group in		
climate induced	-% of women	-Women are rarely	-50% of beneficiaries of community	each suco/aldeia with DRM funding and women groups		
disaster prevention	benefitted from	direct beneficiaries of	level measures for cimate related	are implementing community action plan		
financing in at least	community-level	measues for	disaster risk reduction and	• A list of activities were identified for intervention		
two districts (eg. For	climate risk	community-level	preparedness are women.	and preparedness to reduce vulnerability of		
resilient shelter,	reduction measues.	disaster prevention and		communities to climate induced disasters.		
improved grain		preparedness		• Communities were sensitized through several		
storage and seed				training sessions on the availability of financing for		
replacement,				disaster prevention and preparedness and were also		
windbreaks, storm				involved in participatory community vulnerability		
drains, small scale				capacity assessments.		
flood protection)				Community driven and gender-focused community		
benefitting at least				action plans were developed focusing measures to		
5,000 households.				reduce the risks and vulnerabilities identified in		
				CVCAs.		
				• As per operational manuals of the top-up grant		
				system, money were delivered to community level		
				uisaster prevention investments and activities were		
				implemented by 60 community groups.		

Output 2.2: Community to district level EWS for climate-induced extreme events designed, tested and installed, with related contingency planning) for at least 5,000 vulnerable rural households,-Risk reduction and awareness activities-Few households currently benefit from risk reduction and awareness activitiesAt least 5,000 households will benefit from risk reduction activities and awareness activities comprising;• Existing status of the early warning and response system was assessed to identify best practices, straditional knowledge, gender considerations and capacity gaps. Based on these information, a model and SOPs for EWS was developed through stakeholder conducted awareness and training campaigns on EWS. Training for communities to use information from EWS for decision making to protect lives, properties, agricultural systems -Erosion• Existing status of the early warning and response system was assessed to identify best practices, system vas assessed to identify best practices, system awareness activities.• EWS -Improved resilience of agricultural systems -ural households,-Ews -Improved resilience of agricultural systems -Erosion-Ews -Improved resilience of agricultural systems -Erosion- Improved resilience of agricultural systems -Erosion• Installed six automatic weather stations, which	Objective / Outcome	Indicator	Baseline	Target as per ProDoc	Achievement as of May 2019
with a focus on Control/sustainable land and water management functioned for three months and stopped functioning due to obstruction to batteries and solar panels by shrubs After the TE consultants informed project manager and also the Director General of the relevant institution, immediate action was taken to clean the station areas and the equipment started to function again. They also made communication with the company that installed the weather station to address the project. Weather stations were already handed over to the meteorology department and they should be taking initiation when equipment malfunction but initiation from their side was slow. • Establishment of landslide monitoring in two places were still on-going but not completed. Similarly, of the two water monitoring station, one was completed and establishment of another was still ongoing. Since the project has six months left, these works are expected to complete.	Output 2.2: Community to district level EWS for climate-induced extreme events designed, tested and installed, with related capacities provided (contingency planning) for at least 5,000 vulnerable rural households, with a focus on women.	-Risk reduction and awareness activities introduced at local levels including: -EWS -Improved resilience of agricultural systems -Erosion control/sustainable land and water management	-Few households currently benefit from risk reduction and awareness activities.	-At least 5,000 households will benefit from risk reduction activities and awareness activities comprising; -EWS -Improved resilience of agricultural system -Erosion control/sustainable land and water management	 Existing status of the early warning and response system was assessed to identify best practices, traditional knowledge, gender considerations and capacity gaps. Based on these information, a model and SOPs for EWS was developed through stakeholder consultation and expert analysis. The project also conducted awareness and training campaigns on EWS. Training for communities to use information from EWS for decision making to protect lives, properties, agricultural resources and infrastructures from climate induced disasters is yet to be completed. Installed six automatic weather stations, which functioned for three months and stopped functioning due to obstruction to batteries and solar panels by shrubs After the TE consultants informed project manager and also the Director General of the relevant institution, immediate action was taken to clean the station areas and the equipment started to function again. They also made communication with the company that installed the weather stations were already handed over to the meteorology department and they should be taking initiation when equipment malfunction but initiation from their side was slow. Establishment of landslide monitoring in two places were still on-going but not completed. Similarly, of the two water monitoring station, one was completed and establishment of another was still ongoing. Since the project has six months left, these works are expected to complete.

Objective / Outcome	Indicator	Baseline	Target as per ProDoc	Achievement as of May 2019
Output3.1:Watershed-levelclimatechangevulnerabilityand riskassessmentscarriedout within the Dili toAinaro road corridorcovering at least 35sucos,unformingdistrictandsub-districtlevelplanning,prioritizationbudgeting(linked toWBassessments).	-No of households engaged in climate resilient land use methods and livelihoods (disaggregated by gender)	-Few households have access to resilient livelihood assets and methods (score 2)	-Score improved to 4: By the end of the project, at least 50% of targeted households have engaged in climate resilient land use methods and livelihoods introduced/strengthened in the project.	 Existing data from the WB-BCDRP, UNDP-SDRM and dMAF-ALGIS as well as remote sensing imagery were collated to develop a GIS-based database of geographical, geological and land use characteristics of the DARDC. The GIS-based data were integrated with the CVCAs and CAPs to develop watershed hazard and risk maps identifying risk areas posing a threat to road infrastructure as well as economic and livelihood assets.
Output 3.2 : Micro- watershed management plans designed and implemented to deliver community- driven resilience measures for reducing the impacts of climate-induced disasters (flooding and landslides) in vulnerable micro- watersheds along the Dili-to-Ainaro Road Development Corridor, covering at least 50,000 hectares	-Coverage of land with changed land use conducive to landscape stability, protecting livelihoods and physical infrastructure against climate hazard risks and disasters -% of households that demonstrate an awareness between improved land use and food security/disaster	-Currently lands left behind in shifting, slash-and-burn agriculture are left to recover without intervention and are a major source of vulnerability for communities and the road. -Currently land left behind in shifting, slash-and-burn agriculture are left to recover without intervention and are a major source of vulnerability for	 -At least a quarter of targeted areas of degraded lands reforested or other land stabilization methods applied (eg. Agroforestry, fodder and timber production etc.) while decreasing vulnerability of the DARDC to disasters. -At least 50% of households surveyed confirm a clear link between resource management and resilience of livelihoods and physical infrastructure assets. 	 Provided support to the MAF to integrate the watershed management plans at the local level into the Strategic District Plans and the PDID process. Watershed management plan was developed to address the vulnerabilities of road infrastructure as well as local communities in the DARDC. The project also implemented interventions prioritized in watershed management plans. Plantations were carried out on slopes using fukuoka-style seedballs to rehabilitate larger vulnerable slopes previously damaged by slash and burn agriculture, erosion and other forms of ecosystem degradation. 220,000 seedballs were prepared and disseminated for reforestation. Information and materials were developed and disseminated to promote public awareness on watershed management approaches to reduce hazards posed by climate induced disasters.

Objective / Outcome	Indicator	Baseline	Target as per ProDoc	Achievement as of May 2019
outside of the WB road project RoW.	mitigation through their livelihood (disaggregated by gender)	communities and the road. -Current understanding of the links between land use and livelihoods, food and nutrition security and disaster is low.		 National bamboo strategy was developed to promote bamboo for disaster risk reduction along the road corridor and to strengthen the livelihoods of the local communities. The project supported the Bamboo Institute with a set of bamboo processing machines and 5 community groups received pre-processing bamboo machine sets. These support increased the production capacity of the Bamboo Institute by 3 folds and enhanced the quality of products. The project also supported 10 bamboo groups for bamboo nurseries and plantations in slope lands to prevent disasters and to provide income to the local communities.

Achievement of Project Outputs & Outcomes

This section provides an overview of the main achievements of the project. Considering the results achieved under each of the outcomes, and the progress towards the overall objective, the project effectiveness is rated as Satisfactory. This project generated numerous significant results, meeting several of the planned accomplishments. The project objective was stated as *"Strengthening Community Resilience to Climate-induced disasters in the Dili to Ainaro Road Development Corridor, Timor-Leste (DARDC)*

Based on the respective indicators and overall level of progress toward the three outcomes, the outcomes rating are as follows:

The project supported community-based disaster management by improving policies to mainstream disaster, development of infrastructures like EWS, check-dam, gabion wall, short bridge and flood control arrangement, drinking water storage and distribution and irrigation canal development and also by enhancing resilience by capacity enhancement, knowledge enhancement, income generation activities and policy revision for mainstreaming disaster. Most the project outputs are ranked individually as **Satisfactory**; hence overall the <u>achievement of outputs and activities is evaluated as</u> **Satisfactory**. Most of the project outcomes are achieved as per planned while a few are in the process of completing and expected to complete in remaining six months. Hence achievement of outcomes of the project is also <u>rated as **Satisfactory**</u>.

Outcome 1: Knowledge and understanding of local drivers enhanced, and consequent impacts on economic infrastructure better understood and available to policy makers, planners and technical staff; Output 1.1: National training facility established, providing services for at least 200 district officials, DDOC/DDMC members and community facilitators, in: climate risk and vulnerability assessment, damage and loss assessment, contingency planning, formal and informal EWS systems, climate related planning and budget management;

- Assessed capacity of NDMD (MSS), DoF (MAF), MSA and MCIE for developing and presenting training on DRM and the Climate Change adaptation.
- Organizational strategy developed to strengthen INAP's capacity for delivering training on DRM and the Climate Change adaptation.
- Updated and widened extent of the portfolio of training modules to include aspects that are not sufficiently covered within the current portfolio and both CBDRM and DRM manuals are finalized and approved by the government. Similarly, a comprehensive needs assessment for DRM training was also conducted. DRM training on DRM was conducted to national and district officials benefiting 250 government officials and 200 local members trained on CBDRM.
- Developed an organizational strategy for a national disaster database to coordinate the knowledge management of NDMD (under UNDP-SDRM), NDIEACC (for UNDP-SSRI) and the national Climate Change Center. Also developed and disseminated knowledge and awareness products documenting good practices for DRM from the national and international project/initiatives. These materials are also available online.

Output 1.2: National DRM policy and institutional roles extended to address climate change and disaster risk reduction measures, including assessment methods, institutional and implementation modalities, functional and technical capacities and M&E systems.

- NDRM policy revised to integrate climate change adaptation and submitted to the government for approval. Capacity assessment of NDMD, NDIEACC, MAF and other DRM stakeholders to identify institutional and the organizational capacity gaps was conducted.
- A gender strategy document developed to recommend sector policies, plans and strategies on gender describing institutional, implementation modalities and function.
- Policy briefs were produced and disseminated to government staffs of line ministries and institutions.

The outputs has achieved most of its major targets (only approval of policy remained), and these could contribute to some global environmental benefits. These outputs can be presented as "good practice" and is rated as **Satisfactory**. The project has accomplished most of the activities that were required to make Dili-Aenaro corridor ecosystem and environment of the country sustainable by providing a viable long-term legislative support to environment management for climate induced risk management; hence the <u>outcome achievement is rated as **Satisfactory**.</u>

Outcome 2 Sub-national DRM institutions able to assess, plan, budget and deliver investments in climate change related disaster prevention, linked to critical economic infrastructure and assets in the Dili to Ainaro development corridor

Output 2.1 Capacities of district and sub-district Disaster Management Committees and District Disaster Operation Centers strengthened to plan, budget and deliver climate-induced disaster prevention financing in at least two districts (eg. for resilient shelter, improved grain storage and seed replacement, windbreaks, storm drains, small scale flood protection) benefitting at least 5,000 households

- A top-up grant system for local DRM institutions and local administrations was developed to increase financial support for disaster prevention and preparedness activities as well as general resilience measures.
- Guidelines and operational manuals for the top-up grant system was developed to deliver disaster prevention and preparedness interventions.
- Support provided to establish women's group in each suco/aldeia with DRM funding and women groups are implementing community action plan.
- A list of activities were identified for intervention and preparedness to reduce vulnerability of communities to climate induced disasters.
- Communities were sensitized through several training sessions on the availability of financing for disaster prevention and preparedness and were also involved in participatory community vulnerability capacity assessments.
- Community driven and gender-focused community action plans were developed focusing measures to reduce the risks and vulnerabilities identified in CVCAs.
- As per operational manuals of the top-up grant system, money were delivered to community level disaster prevention investments and activities were implemented by the community groups.

Output 2.2: Community to district-level EWS for climate-induced extreme events designed, tested and installed, with related capacities provided (contingency planning) for at least 5,000 vulnerable rural households, with a focus on women;

- Existing status of the early warning and response system was assessed to identify best practices, traditional knowledge, gender considerations and capacity gaps. Based on these information, a model and SOPs for EWS was developed through stakeholder consultation and expert analysis. Also conducted awareness and training campaigns on EWS. Still training for communities to use information from EWS for decision making to protect live, property, agricultural resources and infrastructures from climate induced disasters is remained to complete.
- Installed six automatic weather stations which functioned for three months and after that stopped functioning. Weather stations were covered with weeds and saplings of the trees. TE consultants informed project manager and also the Director General of the relevant institution and immediate action was taken to clean the station area and also communication with the company that installed the weather station was made to address the problem. A month later, it was learned that the weather stations resumed function after maintenance (http://202.68.183.188/users/maps). Weather stations were already handed over to the meteorology department and they should be taking initiation when equipment malfunction but initiation from their side was slow.

• Establishment of landslide monitoring in two places were still on-going but not completed. Similarly, of the two water monitoring station, one was complete and establishment of another was still ongoing. Since the project has six months left, these works are expected to complete.

The outcome of weather knowledge based land use planning, budgeting, delivering investments in climate change related disaster prevention linked to critical economic infrastructure and assets in the project corridor sites is achieved to some extent and after repairing the equipment and training communities and local government institutions on use of information from the EWS will help to achieve the targeted outcome and is <u>rated as **Moderately Satisfactory**</u>. Similarly, outputs under this outcome have achieved some of its targets, and expected to yield substantial environmental benefits of local and global value through capacity enhancement and knowledge based planning. The outputs can be presented as "moderate practice", hence is evaluated as **Moderately Satisfactory**.

Outcome 3 Community driven investments implemented to reduce climate change and disaster induced loses to critical infrastructure assets and the wider economy.

Output 3.1: Watershed-level climate change vulnerability and risk assessments carried out within the Dili to Ainaro road corridor covering at least 35 sucos, informing district and sub-district level planning, prioritization and budgeting (linked to WB hazard assessments)

- Existing data from the WB-BCDRP, UNDP-SDRM and MAF-ALGIS as well as remote sensing imagery were collated to develop a GIS-based database of geographical, geological and land use characteristics of the DARDC.
- The GIS-based data were integrated with the CVCAs and CAPs to develop watershed hazard and risk maps identifying risk areas posing a threat to road infrastructure as well as economic and livelihood assets.

Output 3.2: Micro-watershed management plans designed and implemented to deliver communitydriven resilience measures for reducing the impacts of climate-induced disasters (flooding and landslides) in vulnerable micro-watersheds along the Dili-to- Ainaro Road Development Corridor, covering at least 50,000 hectares outside of the WB road project RoW.

- Provided support to the MAF to integrate the watershed management plans at the local level into the Strategic District Plans and the PDID process.
- Watershed management plan was developed to address the vulnerabilities of road infrastructure as well as local communities in the DARDC. Also implemented interventions prioritized in watershed management plans.
- Plantation carried out on slopes using fukuoka-style seedballs to rehabilitate larger vulnerable slopes previously damaged by slash and burn agriculture, erosion and other forms of ecosystem degradation. 220,000 seedballs was prepared and disseminated for reforestation.
- Information and materials were developed and disseminated to promote public awareness on watershed management approaches to reduce hazards posed by climate induced disasters.
- National bamboo strategy was developed to promote bamboo for disaster risk reduction along the road corridor and to strengthen the livelihoods of the local communities.
- Supported 10 bamboo groups for bamboo nurseries and plantations in slope lands to prevent disasters and to provide income to the local communities.
- Supported Bamboo Institute with a set of bamboo processing machines and 5 community groups received pre-processing bamboo machine sets. These support increased production capacity of the Bamboo Institute by 3 folds and enhanced the quality of products.

The project was able to achieve the outcome of implementing community driven investments to reduce climate change and disaster induced losses to critical infrastructure assets and the wider economy through plantation in landslide prone areas, disseminating awareness materials to generate awareness on watershed management, developed GIS based database to support planning and chanting attitude of

communities and local institution staffs hence <u>outcome is rated as **Highly Satisfactory**</u>. Similarly, the outputs under this outcome have achieved all of the targets, and generated awareness among some of the target population on water management, water quality, health issues, forest protection etc. The outputs can be presented as "good practice", hence it <u>is evaluated as **Highly Satisfactory**</u>.

3.3.2 Relevance

The development challenges of Timor Leste are i) addressing severe human and institutional capacity gaps for development; ii) stimulating stable economic growth, particularly domestic market; iii) addressing gender inequalities; and iv) managing the socio-economic pressure from a rapidly growing population. Limited road infrastructure is a major constraint to national economic development and maintaining road against natural calamities like landslides, erosion and wind is serious challenge to this country. The interior of Timor-Leste is mountainous and about 40% of the country having a slope greater than 20⁰. There is lack of strategy to link wider landscape stabilisation and landscape-wise management of road development corridors to road infrastructure sustainability.

The northern part of the country experiences a uni-modal rainfall pattern, with four to six wet months from December to April or June while southern part experiences a bi-modal rainfall pattern comprising seven to nine wet months. As per prediction of IPPC, the temperature of Timor-Leste is expected to increase by 0.3 to 1.2° C by 2030 and 0.8 to 3.6° C by 2070. Rainfall is predicted to decrease in the dry season and increase in the wet season with overall rainfall increase by 7 to 13% by 2050. This will further accelerate environmental problems like landslides to the country. The solution to these issues is to strengthen the resilience of communities living along the main highways and to reduce the risk of damage to the road infrastructures. This project aim to achieve this by specifically targeting and strengthening institutional and technical capacities of sub-national government officials to plan for and implement disaster risk management measures using ecosystem-based approaches. Significant barriers to achieving the implementation of DRM using ecosystem-based approaches of this project include: i) limited knowledge and understanding of climate-induced disasters; ii) limited capacity of subnational officials to plan for and respond to disasters; and iii) insufficient financial resources to deliver DRM measures using ecosystem-based approaches.

The project is also in line with the national priorities of the Government of Timor-Leste and is consistent to the plans and strategies of the government of Timor-Leste to address environmental issues, uplift rural economy, alleviate poverty, protect and manage road infrastructures and fulfil country's commitments to the global environment forums.

The project intervenes to reduce land degradation and contribute to human lives and property along the Dili to Ainaro Road Corridor of Timor-Leste and is congruent with GEF and national priorities, and remains pertinent in light of the current levels of threats; hence <u>it is evaluated as **Relevant**</u>.

3.3.3 Effectiveness and Efficiency

Cost-effectiveness

The UNDP Guidance for Conducting Terminal Evaluations of UNDP-supported projects defines the criteria of "efficiency" as:

"The extent to which results have been delivered with the least costly resources possible; also called cost effectiveness or efficacy."

The project has not exceeded the budgeted figures and most of the planned deliverables were also completed by the time of terminal evaluation so the cost-effectiveness is Highly Satisfactory. Many of the activities of all three components were accomplished with some shortcomings like incomplete automatic weather stations and flood and landslide monitoring equipment establishment and functioning and utilisation of the Early Warning System. These equipment has warranty of two years and also agreement with the installing agency include provision of providing training for the staffs of the Meteorology Department and also repair for two years. But neither EWS equipment were monitored nor reported to the agency for repairing and only after reporting by TECs to relevant institutions, initiation has taken place. Overall management cost was not more than initially budgeted. Total expenses of the project were only 68.5% of the total budgeted amount and this expense is including management cost. As project has six months left to complete the remaining activities, they are expected to complete within the planned budget. Despite the lack of committed contribution from the partners, the project was able to accomplish most of the targeted activities within the budget of GEF and kind contribution from the GoTL. Some money from GEF and kind contribution from the cost of accomplishment of remaining activities in the coming six months (i.e. remaining period of the project). Hence project is cost effective.

The project generated support from the government which helped to reduce cost of project office space. The project mostly used national consultants to provide technical advice, helping to reduce the overall costs of project management that otherwise could be very high. Involvement of local communities in implementing project activities helped to increase their knowledge and skills. Income from the project activities and water harvesting improved the livelihood of communities. Water tank and irrigation helped in community health and also agriculture practices improved livelihood, enhancement of capacity of the government, sub-government and the community institutions helps in managing disaster sustainably.

The project was able to achieve several of expected outputs, and cost-effectiveness has been a priority of the implementing agency throughout, amongst their priorities. This, combined with significant levels of additional co-financing leveraged by the project's activities, means the overall cost-effectiveness of the project has been good, hence it is evaluated as **Highly Satisfactory**.

The project was able to achieve most of the expected outcomes and objectives. The initial delays in implementation were caused by slow procurements and implementation contributing to the failure to accomplish mid-term target, but in the second half, the project was implemented in a good pace and was able to achieve most of the targets with only few shortcomings (automatic weather stations). Stakeholders expressed satisfaction with the accomplishments of the project and are of the view that the project needs more activities to have significant impact and to meets its objectives.

The project has facilitated changes in management practice and the development planning processes and has increased the level of awareness about the long term positive impacts of DRM, especially in the context of the climate change. Similarly, project delivery modalities have been efficient and the project has been able to contribute to the GEF and UNDP objectives and also to national priorities. Since some of the interventions of the project showed impact (impact on planning processes, decrease in environment risks, increased awareness on cause of disaster and environmental problems, improvement in agricultural outputs due to irrigation and decrease in drudgery of women and improvement in health due to water supply etc.) while others are yet to show impact, the effectiveness of the project is rated as <u>Satisfactory</u>.

The project followed standard scientific methods and used qualified technical manpower. The project maintained good relations with all stakeholders and worked in close cooperation and this helped to execute activities efficiently with their cooperation.

3.3.4 Country Ownership

This project was developed with the lessons from several projects related to sustainable environment management. Government, local government, Communities, NGOs, academic institutes and other experts from Timor Leste were involved in the project development. The project was implemented by the Ministry of Social Solidarity (MSS) and executed by UNDP. The project outcomes will bring Timor-Leste a step closer to achieving MDG Goal 7: Ensure environmental sustainability and MDGs like no poverty, zero hunger, gender equality, Climate Action, life below water and life on land.

The project will build GoTL's policies and strategies to strengthen DRM by integrating climate change risks into the development planning and implementing community-based interventions for adaptation to the climate change. The project interventions are aligned with the GoTL's National Policy on Disaster Risk Management, Sustainable Land Management strategy and Guidelines, National Biodiversity Strategy and

Action Plan and Strategic Development Plan (SDP, 2011-2030). The project activities are consistent to UNDP Timor-Leste Country Programme Document.

3.3.5 Mainstreaming

One of the key areas for successful implementation of a project is to have an appropriate and effective public awareness, communication and mainstreaming strategy that will deliver the message to the people in order to achieve the project objectives. This project delivered global environmental benefits by supporting Timor-Leste in the transition towards mainstreaming disaster risk management and sustainable economic development. The project promoted cooperative action among agencies concerned, thereby combining disaster risk management, early warning system establishment and rural livelihood improvement for enhancing resilience objectives, and fostering joint planning of the sustainable use of the globally and nationally significant watershed management. The project contributed to enhance enabling environment for integrated landscape management in the Dili-Ainaro road corridor and catchment areas while facilitating the adoption of integrated and adaptive management approaches by the government as well as the local communities.

The mainstreaming of integrated environment Management into development planning by the sub-national and the national government and capacity enhancement by this project is very important for mitigation of risks related to the climate change and disaster. Enhancing knowledge and involving local government and community based institutions in the project implementation has helped to mainstream climate change and the disaster management. Development of a knowledge base and information supports evidence based planning. Enhancing knowledge and making community aware of benefits of using information from monitoring and various practises to minimise damage from disaster contributes to minimising risks and safeguarding livelihoods, economy and is in line with the UNDP Country Program Action Plan (CPAP).

As per project document, the project development process involved analysis of various options of management by utilising scientific knowledge, indigenous knowledge and lessons learned from past projects. The project's efforts were focused on identifying policy gaps and recommending policy needs, developing participatory monitoring system to support community decision making and rehabilitation of ecosystem in deforested areas and sustainable DRM practices to prevent deforestation and disaster and enhancing capacity of the local government and the community based institutions and networking with like-minded national, regional and international institutions for fostering mainstreaming of DRM in development planning and implementation. The DRM approach to address road corridor, private land, and economic development reducing environmental risk was relevant as people had a clear vested interest due to the direct contribution to their livelihoods.

The fundamental principle of the project was to address policy gaps, enhance knowledge of the planners and the local communities and establish knowledge base and mainstreaming land management into development planning and make a system of early warning to disaster to safeguard lives and property. For effective management of multi-use areas, the environment issues will be mainstreamed to contribute to nature conservation and sustainable development into the national strategic development plans, institutional operational plans, and reflected in the community development plans.

3.3.6 Sustainability

The project results are likely to be sustainable beyond the project life. As will be seen below, the sustainability at the project level is actually very strong and it is difficult to see what more those involved could have done.

<u>Financial</u>: The outlook for the long-term financial sustainability of the project appears unusually good but it is connected to the interest of the local government and the national government. The National government is planning to replicate such activities in other areas also in the same modality and for that they are planning to apply for donor agencies and also the World Bank. The National and local government also mentioned that they will provision budget for the maintenance of the outcome of this project. Similarly, the local government mentioned that they will continue their support and will utilise information in planning exercises help to mitigate DRM risks. These also assure financial sustainability at national and project site level. Financial sustainability is therefore **Likely**.

<u>Socio-economic</u>: The social sustainability of the project appears very promising in case of irrigation, agroforestry, horticulture and water supply. The awareness-raising activities have certainly been beneficial and undoubtedly changed people's minds at the community level but it is still not sufficient as the training was only of one day. There is need of more awareness programs to enhance their knowledge and boost confidence. But the project has created a supportive environment and as a result enjoys a very wide support base which could be used in replicating the approach in other vulnerable areas. As a result, <u>the socioeconomic sustainability is adjudged to be **Likely**.</u>

<u>Institutional and Governance</u>: The institutional sustainability of the project is good. Those agencies directly involved appear strongly committed towards its aims and the impacts that it has had. Clearly, the decision to route all activities directly through local government institutions and the local communities has paid dividends in this respect, and the local government officials at the pilot sites are not only extremely supportive of what has been accomplished but are also strong advocates of its activities. Implementation of community monitoring system for supporting communities from various occupation in decision making and practicing of evidence based development planning and enhanced capacity of the local communities and the local government will also assure sustainability of the project outcomes. Moreover, government authorities are sensitised on DRM issues so they may prioritise future outputs of this project. Therefore, the institutional sustainability is ranked as Likely.

<u>Environmental</u>: Environment sustainability is one of the important elements of the project strategy. The project achievements will directly reduce vulnerability of road corridor and life and property of communities living along the road corridor. The capacity development, policy review and evidence based planning to mainstream DRM and the climate change will make project outcomes sustainable. Moreover, involvement of the local communities and community based organisations assures adaptation to disasters owing to the climate change and makes the project achievements sustainable. Possible precautions are taken to safeguard the ecosystem along the road corridor through increasing green coverage, improved agriculture practices, controlling erosion and flood control. Similarly, creation of woodlots will help to create carbon sinks and improved use of ecosystem services will improve livelihood of people and decrease pressure on the forest. These address potential environmental risks so there is less possibility of environmental risks associated with the sustainability of this project, hence the environmental sustainability is deemed to be **Likely**.

The overall sustainability of the regional component is ranked as Likely.

3.3.7 Impacts

Table 8 provides a review of the likelihood of outcomes being translated into intended impacts.

TABLE 8: Review of outcomes to impacts at the end of project situation

Component	Findings	Review of Outcomes to Impacts
Site Level Outcomes		

Component	Findings	Review of Outcomes to Impacts
Outcome1:Knowledgeandunderstanding of localdrivers enhanced, andconsequentimpactsoneconomicinfrastructurebetterunderstoodandavailabletopolicymakers, planners andtechnical staff	 Assessed capacity of NDMD (MSS), DoF (MAF), MSA and MCIE for developing and presenting training on DRM and Climate Change adaptation. Organizational strategy developed to strengthen INAP's capacity for delivering training on DRM and Climate Change adaptation. Updated and widened extent of the portfolio of training modules to include aspects that are not sufficiently covered within the current portfolio and both CBDRM and DRM manuals are finalized and approved by the government. Similarly, a comprehensive needs assessment for DRM training was also conducted. DRM training on DRM was conducted to national and district officials benefiting 250 government officials and 200 local members trained on CBDRM. Developed an organizational strategy for a national disaster database to coordinate the knowledge management of NDMD (under UNDP-SDRM), NDIEACC (for UNDP-SSRI) and the national Climate Change Center. Also developed and disseminated knowledge and awareness products documenting good practices for DRM from the national and international project/initiatives. These materials are also available online. NDRM policy revised to integrate climate change adaptation and submitted to the government for approval. Capacity assessment of NDMD, NDIEACC, MAF and other DRM stakeholders to identify institutional and organizational capacity gaps was conducted. A gender strategy document developed to recommend sector policies, plans and strategies on gender describing institutional, implementation modalities and function. 	AB: Likely

Component	Findings	Review of Outcomes to Impacts
Outcome 2: Sub- national DRM institutions able to assess, plan, budget and deliver investments in climate change related disaster prevention, linked to critical economic infrastructure and assets in the Dili to Ainaro development corridor •	A top-up grant system for the local DRM institutions and local administrations was developed to increase financial support for disaster prevention and preparedness activities as well as general resilience measures. Guidelines and operational manuals for the top-up grant system was developed to deliver disaster prevention and preparedness interventions. Support provided to establish women's group in each suco/aldeia with DRM funding and women groups are implementing community action plan. A list of activities were identified for intervention and preparedness to reduce vulnerability of communities to climate induced disasters. Communities were sensitized through several training sessions on the availability of financing for disaster prevention and preparedness and were also involved in participatory community ulnerability capacity assessments. Community driven and gender-focused community action plans were developed focusing measures to reduce the risks and vulnerabilities identified in CVCAs. As per operational manuals of the top-up grant system, money were delivered to community level disaster prevention investments and activities were implemented by the community groups. Existing status of the early warning and response system was assessed to identify best practices, traditional knowledge, gender considerations and capacity gaps. Based on these information, a model and SOPs for EWS was developed through stakeholder consultation and expert analysis. Also conducted awareness and training campaigns on EWS. Still training for communities to use information from EWS for decision making to protect live, property, agricultural resources and infrastructures from climate induced disasters is remained to complete. Institution and immediate action was taken to clean the station area and also communication with the company that installed the weather station as per desired by the project. Weather station swe and also the Director General of the relevant institution and immediate action was taken to clean the station area a	AB : Likely

Component	Findings	Review of Outcomes to Impacts
Outcome3:Communitydriveninvestmentsimplementedimplementedtoreduce climate changeand disasterand disasterinducedlosestocriticalinfrastructureassetsandthewidereconomy.	 Existing data from the WB-BCDRP, UNDP-SDRM an dMAF-ALGIS as well as remote sensing imagery were collated to develop a GIS-based database of geographical, geological and land use characteristics of the DARDC. The GIS-based data were integrated with the CVCAs ad CAPs to develop watershed hazard and risk maps identifying risk areas posing a threat to road infrastructure as well as economic and livelihood assets. Provided support to the MAF to integrate the watershed management plans at the local level into the Strategic District Plans and the PDID process. The watershed management plan was developed to address the vulnerabilities of road infrastructure as well as local communities in the DARDC. Also implemented interventions prioritized in watershed management plans. Plantation carried out on slopes using fukuoka-style seedballs and bamboo saplings to rehabilitate larger vulnerable slopes previously damaged by slash and burn agriculture, erosion and other forms of ecosystem degradation. 220,000 seedballs was prepared and disseminated for reforestation. Information and materials were developed and disseminated to promote public awareness on watershed management approaches to reduce hazards posed by climate induced disasters. National bamboo strategy was developed to promote bamboo for disaster risk reduction along the road corridor and to strengthen the livelihoods of local communities. The project also supported 10 bamboo groups for bamboo nurseries and plantations in slope lands to prevent disasters and to provide income to the local communities. The project supported Bamboo Institute with a set of bamboo processing bamboo machine sets. These support increased the production capacity of Bamboo Institute by 3 folds and enhanced the quality of the products. 	AB: Likely

TEC found local people very much aware of the environmental risks and safety precautions. Also the local and national government officials were very much sensitized on the issues of disaster risk management and made future plans and programs to address environmental issues of the Dili-Ainaro corridor. Awareness generated among the community members was resulted in them contributing in planting trees, construction of stone wall along the landslide prone areas, practicing environmental friendly agriculture practices. Subnational and national government has been doing and also assured to continue follow up of monitoring and continuation of management of interventions in the future. Automatic Weather stations were set but were facing some technical problems and also mechanism to make general public aware of the weather information and utilisation of them is yet to be arranged. This project helped to initiate coordination between different government agencies and community organisations which is very important for promoting an integrated approach and helps to bring together expertise from diverse fields. Similarly, construction of check dam to control flood and Gavin wall helped in controlling flood and landslides. Training and helping communities in various income generating activities helped to improve rural economy. Awareness was generated but after the end of the project, continuation of management of interventions of the projects is yet to be strengthened. These indicate that the expected impact beyond the project life in most of the areas is likely.

Documentation and dissemination of information on DRM helped to share knowledge for benefit of large population from various countries with disaster risks. Similarly, improvement in disaster management plan to addressing environmental and economic aspects will help to mainstream integrated environment management in development practices for mitigation of such risks and make the outcomes sustainable and also effective implementation of DRM.

As a result of the review of outcomes to impacts, the overall likelihood of <u>impacts being achieved is all</u> <u>Likely</u>, hence the project is expected to achieve most of its major environmental objectives, and yield satisfactory environmental benefits by managing environmental risk and its <u>effectiveness is evaluated as</u> <u>Satisfactory</u>.

3.3.8 Ratings

104. As per UNDP guidelines, the TE ratings are consolidated in Table 9 below.

Table 9: Terminal Eva	auation's Kating of Floject Fertormance	
Criterion	Comments	Rating
Monitoring and Evaluation		
Overall quality of M&E	The design of M&E was up to standard with a fully itemised and cost plan included in the Project Document covering all the various M&E steps including the allocation of responsibilities. But the monitoring and feedback mechanism on technical aspects was slightly weak at the ground specially the EWS.	Satisfactory
M&E design at project start up	The design of M&E was up to standard with a fully itemised and cost plan included in the Project Document covering all the various M&E steps including the allocation of responsibilities	Highly Satisfactory
M&E Plan Implementation	M&E implementation was satisfactory in case of internal monitoring while monitoring of the function of EWS equipment and their status etc was weak. Weak EWS monitoring affected information based planning for addressing disaster.	Moderately Satisfactory
IA & EA Execution:		
Overall Quality of Project Implementation/Execu tion	The Project implementation was slow at the beginning and was improved after the recruitment of the second project manager (CTA) so overall implementation was good which resulted in almost complete implementation of the activities. Technical feedback was weak which cause delay in repairing of equipment and function of EWS was affected.	Satisfactory
Implementing Agency Execution	MSS and UNDP integrated team exhibited drive to meet the targets and able to completed most of the activities. Only development of exit strategy, repairing of EWS equipment and training locals on use of EWS information is left. After TE team briefed on the status of EWS equipment, initiation was taken to clean the area and also initiated communication for repairing the equipment and also completed the remaining instalment activities.	Satisfactory
Executing Agency Execution	The Ministry of Social Solidarity is the executing agency linked very well with UNDP; and was very actively involved in project guidance especially at the project steering Committee level and provided some level of supervision and backstopping to the Project.	Satisfactory
Outcomes		
Overall Quality of Project Outcomes	Overall quality is of the standard order (for those that were complete).	Satisfactory
Relevance	The project intervenes to strengthening resilience to Climate Chagne induced disasters in the Dili to Ainaro, is congruent with GEF and national priorities, and remains pertinent in light of the current levels of threats.	Relevant
Effectiveness	A review of outcomes to impacts (ROtI) shows the overall likelihood	T '1 1

 Table 9: Terminal Evaluation's Rating of Project Performance

of impacts being achieved is Likely.

Likely

Cost-effectiveness (Efficiency)	Project management costs were not higher than the allocated budget and most of the expected outcomes were completely achieved by the time of terminal evaluation. Similarly, activities implementation was slow in the beginning but recruitment of new project manager addressed the problem and implementation took the speed so many activities were completed within the project life.	Highly Satisfactory
Sustainability:		
Overall likelihood of risks to Sustainability	There are some risks but since stakeholders are aware, strengthened and committed it is assumed that these risks will not take place or could be handled.	Likely
Financial resources	Good – Central government, local government and community based groups showed long-term commitment to the area and there is evidence of considerable technical, policy and some financial commitments from the government. Government also planning to replicate with the fund from another project.	Likely
Socio-economic	Good – beneficiaries showed increased awareness so this will help to address such problems by themselves and also they have already established various groups and initiated raising fund for future management so socio-economic sustainability is promising.	Likely
Institutional framework and governance	Institutionally good through strengthened capacity and support from senior staff in the government both at local and central levels. Community institution and local government strengthened.	Likely
Environmental	The project itself is designed to address environmental risks and other than unpredictable ones there are no evident risks. Some risks related to climate change exist but that is beyond control of project. The project had activities to address climate induced risks by construing Gabion walls, check-dams, river control arrangements and plantation in landslide prone areas.	Likely
Environmentel Status	Improved mountain and watershed monogements concretion of	
Improvement	Improved mountain and watersned management; generation of information on weather and armament of EWS, erosion control measures, plantations, water collection and distribution, irrigation, and policy support environmental activities contributes to address climate induced disasters and protect life, property, infrastructures etc. Community members and local and national authorities are aware on the subject. Water support contributed to decrease drudgery of women and also contributed to local health, irrigation contributed to increase crop production. Similarly support to various agriculture and non- agriculture activities contributed in income generation of rural households.	Maximum
Environmental Stress Reduction	Construction of physical structures like check-dam, Gambian wall, flood control dams and plantation of tree saplings on the slopes will help to control erosion and landslides and capacity enhancement of local government and community based organisations reduces environmental stress by encouraging knowledge based planning. Similarly, construction of water storage and distribution system helps in addressing health issues and also reduce drudgery of women. Irrigation canal development supports agricultural activities and improve local economy and enhance their resilience and adaptive capacity. Early Warning System helps to prepare communities to protect live, property and infrastructures from climate induced disasters. Moreover, awareness generation on local communities and at government level also creates an environment for proper planning to	Maximum

Progress towards stress/status change	Good – Development of policy to mainstream environment and disaster issues, enhancing capacity of national and local government on disaster management and also knowledge based planning to address disaster and other climate induced risks, construction of gabion walls, check- dams, flood control arrangements and plantation of tree saplings in steep lands, installing equipment to measure weather, landsides and flood and making arrangement to disseminate weather information to communities, and enhancing local economy through various income generation activities and also construction of water distribution and irrigation to enhance resilience and adaptive capacity helped to reduce	Maximum
	the stress or threats induced by climate change.	
Overall Project		Satisfactory
Kesuits		v

4. Conclusion, Recommendation & Lessons Learned

4.1 Conclusion

The project was able to accomplish most of the activities and the remaining ones are also expected to finish in the remaining months of the project and will contribute towards meeting the targets with follow up and support from the implementing and executing agencies. To address the DRM related problems, the project intervened in seven main areas: review and improvement of policies, awareness raising, infrastructure development, weather warning arrangement, plantation and improvement of farming practices with technical knowledge and added irrigation facilities, improvement of health by drinking water services and improvement of rural household economy. The policy development approaches included revision of policies and plans to mainstream DRM. Similarly, municipality level awareness training were conducted to enhance knowledge on DRM, which will influence local level planning to mainstream DRM and to improve resilience to the climate change. To encourage evidence based planning, the project conducted studies and generated knowledge base that was supported with GIS mapping. Community based small scale infrastructure facilities such as water tanks and distribution pipes, irrigation canals, check dams, gabion walls, river control structures, short bridges and automatic weather stations were constructed to enhance resilience and strengthen adaptation. Without addressing livelihoods of the people it is not possible to address environmental issues as poverty is one of the root causes of problem. Hence, the project trained farmers for better farming practices, sustainable fisheries, agro-forestry and other income generating activities, which provided the dual benefits of improving household economy and also supported environmental protection and disaster management. Developing clean water supply helped to decrease drudgery of women who otherwise had to travel long distance to fetch water. Activities like plantation, gabion wall and check dams addressed erosion problems and protected economically very important Dili-Ainaro road infrastructure. To disseminate information to a large audience, information generated by the project was uploaded in websites of the implementing Ministry and UNDP, and networking with likeminded institutions within the country. Awareness trainings, radio, television programs, brochure distribution, sign posts and campaign programs also helped to make large audience aware on the project activities and understand the environmental issues.

This Project was designed with provision for appropriate management arrangements for Disaster Risk Management (DRM) in the Dili-Ainaro corridor and was able to implement most of its planned activities showing some initial sign of impacts. The automatic weather stations will help to provide early warning on possible disaster risk to communities to safeguard their lives and properties. The irrigation facilities together with knowledge on better farming practices (with financial support) will help to increase yield contributing household economy and other income generation activities from top-up and community grants will further strength local economy. Similarly, target of increasing green coverage through tree plantation and agroforestry was completed and plantation success rate was also very good. Automatic weather stations were established but stopped functioning after three months. After the issue was raised by the TEC, it was repaired and started producing weather information again. The landslide and flood monitoring equipment installation were ongoing and expected to complete in the remaining time of the project. Similarly, the capacity development activity of communities and local governments to utilise weather information was in plan and expected to complete in the remaining time of the project. The project conducted various awareness programs for communities, local government and national government staffs to raise awareness. However, government institutions still need to be more responsible in carrying out project activities to achieve the outcomes of the project. The Project is able to change attitude of communities and local and national government personnel. Project implementation was very slow in the initial years but after the appointment of a new manager, it moved very fast and dramatically completed most of the activities. Despite several difficulties, the project has managed to deliver a series of interventions that have reduced the environmental threats to a large extent. This has partly been achieved through generation of awareness from local to the national level, mainstreaming DRM into development planning through mainstreaming disaster risks in development plans, creating a knowledge base and facilitating access to it, as well as construction of physical structures to combat soil erosion, landslides and deforestation. The project has been underpinned by good science but a technical back up was weak in case of automatic weather station (relevant institution should take proactive role) and always there are still rooms for further technical improvement. One of the important achievements of the project is that it has enhanced capacity to incorporate ground information related to DRM, socio-economic condition, environmental threats and management approach into the development planning process of the local government in the pilot areas; and improved environmental awareness and raised concerns about environmental risks and ecosystem services at the local communities and the government.

To make the outcomes and interventions sustainable, the project formed community groups, trained them in DRM, farming techniques, controlling erosion and utilising weather information for preparing themselves to potential disasters. Similarly, local as well as national government staffs were trained to enhance their knowledge who have shown willingness to replicate in new areas. They have also committed to continue supports to the activities of this project. The community members were made aware of the benefits of practicing sustainable harvesting of ecosystem services, managing water, conduct various activities to control erosion and landslides etc. The project tested programmatic approach of addressing environmental issues with participatory planning and implementation. Since these approaches showed many positive impacts, the lessons learned from this should be replicated in other vulnerable areas of Timor-Leste. Only thing left to complete is development of communication system for early warning mechanism and to conduct training for local government and the community institutions to utilise the weather information for avoiding damage from climate induced disasters and approval of revised NDRM policy to integrate climate change adaptation. It is expected that within the remaining months of the project these will be completed including an exit strategy for the sustainability and the maintenance of the project activities.

4.2 **Recommendations**

Corrective actions for the design, implementation, monitoring and evaluation of the project.

- I. The project design needs to include activities that gives bigger economic benefits. The project should also study market for various products from local market to national and international markets for high value products. There should also be a plan for linking rural products to better markets.
- II. Timor-Lester is surrounded by sea from three sides. Future project should also explore opportunities of harvesting fish or other creatures and pearl from the sea for nutrition improvement and also for economic development.
- III. Future project should consider promoting alternative sustainable energy such as wind energy, solar energy and hydro energy to help reduce pressure on the forests.

Actions to follow up or reinforce initial benefits from the project

- IV. The automatic weather stations stopped functioning after 3 months of operation and was repaired only after TE consultant reported the issue to the project director. These should be maintained continuously in the future so that intension of these weather stations could be fulfilled. Weather stations are already handed over to the Meteorology Department, so it's their responsibility to take care of the equipment and to keep the surrounding of equipment clean and clear of shrubs. The equipment has 2 years warranty, so if any problem arises with the equipment then the relevant department should inform UNDP immediately or communicate to the supplier to fix the issues. The landslide and flood monitoring stations works are yet to be completed. These works should be completed immediately. The project should also conduct training for the local government and communities on use of weather information for safeguarding their life, property and public infrastructures.
- V. The project should develop exit strategy including arrangement of reinforcing benefits of this project.

Proposals for future directions underlying main objectives

VI. The project piloted community based disaster management through programmatic approaches. Various interlinked issues were addressed by this project through the holistic approach. The project not only constructed infrastructure to control disaster but also made communities and government agencies aware on adaptation and mitigation measures. To enhance adaptive capability for making community resilience to the climate change induced disasters, it successfully implemented income generation activities, which were suitable for the project sites. UNDP should maintain its credibility by continuing

such activities in the future, and for that UNDP should mobilize fund. In this project, the funding commitment from UNDP was not realized in reality.

- VII. It is recommended to upscale and replicate lessons learned from this project by UNDP and other agencies involved in this project. This project has piloted community based disaster management in the Dili-Ainaro corridor and have generated a lot of practical knowledge. More areas of the project districts are still not covered by this project and there are other districts where such risk situation exists. Hence, up scaling should be done in those vulnerable areas within the present project districts and also other districts. To provide regular technical back-up and also for close monitoring, UNDP should provision a technical staff in UNDP CO Timor-Leste. Close monitoring and providing immediate feedback help to address problem timely and make project run on the track.
- VIII. Programmatic approach of UNDP has been very successful in addressing the issues with multiple benefits. Government of Timor Lester decided to utilise fund in replicating successful approach of this project in other areas. UNDP has not contributed committed fund to this project. To maintain its credibility, UNDP should mobilize resources and available budget for such activities.
- IX. The community exchange visits was lacking in this project. Future project should have exchange visits for communities to learn from others. Future project site people could be brought to the present project sites for promoting community to community learning and technology transfer from one community to another. This is the best way for transferring technology to farmers as farmers could explain by simplifying the technical terms more appropriately to another farmer making learning more effective.

4.3 Lessons Learned

Best practices and lessons learned in addressing issues relating to Relevance, Performance and Success

Lessons learned are arranged under project-related headings. Further discussions and key points for future projects have been added in this section. Some of the lessons learned listed below have arisen from discussions with persons interviewed during the evaluation and the team thank them for their insights.

Strategic

• Community organisations lack scientific knowledge and are ill-equipped for handling such projects, so support to enhance their knowledge and strengthen their capacity will help to encourage them to continue in adapting risk of climate change and there by facilitate a cooperative approach for reducing damage from climate change induced disaster. Moreover, local adaptation knowledge is easily adapted by the rural communities. Local knowledge should be promoted together with scientific knowledge to respond to local situation as they are more easily adapted by the rural communities. Local communities were good in identifying signs of disaster, land degradation, effect to catchment function and proposing suitable and feasible mitigation measures.

Design

- Working directly through existing government structures brings dividends:
- The project chose to work directly with the National Disaster Management Directorate (NDMD) unde the Ministry of Social Solidarity (MSS), Directorate for Forestry under Ministry of Agriculture and Fisheries (MAF) and other line ministries and local government, rather than setting up parallel implementation structures. This decision has proved very successful not only in empowering government by providing experience and training, but also in developing effective government "ownership", engagement, participation and motivation, thereby promoting long-term sustainability of the project's achievements.
- Designing a project linking various institutions from grassroots level institutions, government agencies, local authorities and communities generates huge benefits for sustainability, and through the synergies developed provides the intervention with much greater effectiveness than that which can be achieved by stand-alone projects.
- Community participation in the project design, formulation of implementation modality, implementation and monitoring is very important. This will help to implement projects effectively

and also make activities sustainable. In this project, the inclusion of local communities in project design to implementation was good and due to that implementation was strong and had no conflict.

• Local communities were unaware of impact of damage of vegetation of the steep hills and catchment areas and also due to lack of livelihood alternatives they were forced to continue unsustainable practices. With knowledge from awareness programs and support for livelihood activities they switched their harmful practices which reduced risks related to climate change.

Project Management

- Constant contacts with communities are vital to community-based disaster management projects. Good communication and regular technical backups to project activities with the communities helps to promote successful, community-based projects as they built trust and motivation of the targeted local communities. To achieve this, the quality and commitment of those employed at the sites are key attributes of a project. This project initially has suffered from gap in technical feedback from technical staff of the project office and from other partner organisations and due to that implementation was delayed or very slow in the beginning.
- *High participation of women in groups and forming women's groups will assure more success.* Women were found more serious in DARDC activities. It was observed that the groups with more women and women groups were more efficient in implementation and functioning and able to generate expected results. This also helped to generate leadership and develop decision making authority among them and also increased income through income generating activities improving their livelihoods.

Annex 1- Terms of Reference



TERMS OF REFERENCE

TERMINAL EVALUATOR – INTERNATIONAL CONSULTANT

BASIC INFORMATON

Position Title:	TERMINAL EVALUATOR – International Consultant	
Location:	Home based with travel to Dili, Timor-Leste	
Organizational Unit:	Sustainable Development Unit, UNDP	
Reporting to:	Programme Officer, Sustainable Development Unit, UNDP Timor Leste	
Supervised by:	Programme Officer, Sustainable Development Unit, UNDP Timor Leste	
Type of Contract:	Individual Contract	
Languages required	English	
Starting Date:	April 1, 2019	
Contract Date(s):	between April 1, 2019 to May 30, 2019	
Duration of Contract:	25 working days	

A. Project Title:

Strengthening Community Resilience to Climate-induced disasters in the Dili to Ainaro Road Development Corridor, Timor-Leste – DARDC.

B. Project Description:

Timor-Leste has been experiencing unpredictable extreme weather events. Furthermore, climate change projections indicate that these trends are likely to intensify in the future, increasing the frequency and severity of climate-induced disasters, such as floods and landslides. These disasters are likely to put road infrastructure and community assets at increased risk and as a consequence the vulnerability of communities will increase.

The Dili to Ainaro Road Development Corridor (DARDC) comprises a joint investment by the Government of Timor-Leste and the World Bank to upgrade and strengthen the climate resilience of the road infrastructure linking Dili to the capitals of Aileu and Ainaro Districts. The problem that the proposed LDCF project sought to address is that climate change is expected to increase damage to road infrastructure in the DARDC resulting from an increased intensity of climate-induced disasters. Damage to road infrastructure is expensive to repair and restricts: i) economic development; ii) market access; iii) access to services such as education and health care; iv) evacuation during natural disasters; and v) provision of disaster relief. Furthermore, this threat of damage to road infrastructure is exacerbated by ecosystem degradation resulting from existing land-use practices. Such ecosystem degradation increases the risk of floods and landslides owing to reduced water infiltration and increased soil erosion.

The proposed solution to this problem was to strengthen the resilience of communities living along road infrastructure in DARDC to climate-induced disasters such as floods and landslides and to reduce the risk of damage to road infrastructure. This would also safeguard associated social and

economic benefits such as access to markets and essential services. Strengthening livelihoods assets on which communities depend also safeguards household income as households are less prone to - and in a better position to recover from - climate-induced disasters. The proposed project mainstreams gender considerations into its various activities and deliverables

The project aimed to achieve this by specifically targeting and strengthening institutional and technical capacities of sub-national government officials to plan for and implement disaster risk management (DRM) measures using ecosystem-based approaches. Significant barriers to achieving the implementation of DRM using ecosystem-based approaches include: i) limited knowledge and understanding of climate-induced disasters; ii) limited capacity of sub-national officials to plan for and respond to disasters; and iii) insufficient financial resources to deliver DRM measures using ecosystem-based approaches.

The project contributed to overcoming these barriers by: i) enhancing integration of climate change into national DRM policy; ii) providing access to knowledge and training on DRM; iii) strengthening institutional capacity for planning, budgeting and delivering investments into DRM, particularly at sub-national level; iv) developing early warning systems to reduce risks posed by climate-induced disasters; and v) reducing vulnerabilities of communities along the DARC by reducing damage to road infrastructure through implementing climate-resilient and ecosystembased approaches to DRM. The ecosystem-based approach to DRM will support community livelihoods and restore ecosystems to reduce the risks posed by climate-induced disasters. Communities in the vicinity of the project area were included in the selection and implementation of project activities, with a particular focus on ensuring that the interests of local women are adequately represented through implementation of a gender action plan. The project also contributed to clarify the link between climate risk reduction and sustainable agricultural practices. Although local and international NGOs are actively promoting such practices, these programmes currently do not focus on the reduction of climate change risks, nor are they systematically used within road development corridors and other types of infrastructure to increase climate resilience. The project has expected outcomes as follows

- OUTCOME 1. Knowledge and understanding of local drivers of climate induced natural disasters enhanced, and consequent impacts on economic infrastructure better understood and available to policy makers, planners and technical staff
- OUTCOME 2. Subnational DRM institutions able to assess, plan, budget and deliver investments in climate change related disaster prevention, linked to critical economic infrastructure and assets in the Dili to Ainaro development corridor.
- OUTCOME 3. Community driven investments implemented to reduce climate change and disaster induced losses to critical infrastructure assets and the wider economy.

The GEF/LDCF project is part of a joint project with the World Bank. The implementing partner is the National Disaster Management Directorate within the Ministry of Social Solidarity. Other responsible parties include the National Directorate for International Environmental Affairs and Climate Change of the Ministry of Commerce, Industry and Environment, Ministry of State Administration, Ministry of Public Works, Ministry of Finance and the Ministry of Agriculture and Fisheries.

In accordance with UNDP and GEF M&E policies and procedures, all full and medium-sized UNDP support GEF financed projects are required to undergo a terminal evaluation upon completion of implementation. These terms of reference (TOR) sets out the expectations for a Terminal Evaluation (TE) of the project "Strengthening Community Resilience to Climate-induced disasters in the Dili to Ainaro Road Development Corridor, Timor-Leste" (PIMS # 5108). Therefore, UNDP is seeking a qualified International consultant to undertake the terminal

evaluation of the project and all activities undertaken between 2015 and 2019 and prepare and present the Terminal Evaluation Report.

The Terminal Evaluation will be conducted according to the guidance, rules and procedures established by UNDP and GEF as reflected in the UNDP Evaluation Guidance for GEF Financed Projects.

C. OBJECTIVE:

The Terminal Evaluation will be conducted according to the guidance, rules and procedures established by UNDP and GEF as reflected in the 'UNDP Guidance for Conducting Terminal Evaluations of UNDP-supported, GEF-financed Projects' (2012), henceforth referred to as 'TE Guidance'.

The objectives of the evaluation are to assess the achievement of project results, and to draw lessons that can both improve the sustainability of benefits from this project, and aid in the overall enhancement of UNDP programming.

D. EVALUATION APPROACH AND METHOD:

An overall approach and method for conducting project terminal evaluations of UNDP supported GEF financed projects has developed over time. The evaluator is expected to frame the evaluation effort using the criteria of **relevance**, **effectiveness**, **efficiency**, **sustainability**, and **impact**, as defined and explained in the TE Guidance. A set of questions covering each of these criteria will be provided to the selected evaluator. The evaluator is expected to amend, complete and submit this matrix as part of an evaluation inception report, and shall include it as an annex to the final report.

The evaluation must provide evidence-based information that is credible, reliable and useful. The evaluator is expected to follow a participatory and consultative approach ensuring close engagement with government counterparts, in particular the GEF operational focal point, UNDP Country Office, project team, UNDP GEF Technical Adviser based in the region and key stakeholders.

E. DUTIES AND RESPONSIBILITIES:

Under the overall supervision of the responsible officer of Sustainable Development Unit, UNDP Timor Leste, the Consultant will be responsible for the evaluation covering all activities as outlined in the framework of the project.

The evaluator is expected to conduct a field missions to Ailieu, Ermera, Ainaro and Manufahi Municipalities, including the selected project sites. Interviews will be held with the following organizations and individuals at a minimum:

- Ministry of Social Solidarity (MSS)
- Ministry of Agriculture and Fisheries (MAF)
- Ministry of State Administration (MSA)

- Ministry of Commerce, Industry and Environment (MCIE)
- Ministry of Public Works, Transport and Communication (MPWTC)
- Director General for Environment and GEF Focal Point
- Director General for Secretary of State of Civil Protection
- National Director for Climate Change, Secretary of State of Environment
- National Director for Meteorology (MPWTC)
- National Director for national disaster management directorate (NDMD)
- Director, Centre for Climate Change and Biodiversity (CCCB)
- Municipal administrators of Ermera, Ailieu, Ainaro and Manufahi
- Community beneficiaries of Ermera, Ailieu, Ainaro and Manufahi municipalities
- UNDP Country Team

The evaluator will review all relevant sources of information, such as the project document, project reports – including Annual APR/PIR, project budget revisions, midterm review, progress reports, GEF focal area tracking tools, project files, national strategic and legal documents, and any other materials that the evaluator considers useful for this evidence-based assessment. The project team will provide these documents to the selected evaluator.

F. EVALUATION CRITERIA & RATINGS:

An assessment of project performance will be carried out, based against expectations set out in the Project Logical Framework/Results Framework, which provides performance and impact indicators for project implementation along with their corresponding means of verification. The evaluation will at a minimum cover the criteria of: **relevance**, effectiveness, efficiency, sustainability and impact. Ratings must be provided on the following performance criteria:

- Monitoring and Evaluation design at entry
- Monitoring and Evaluation Plan Implementation
- Overall quality of M&E
- Relevance
- Effectiveness
- Efficiency
- Overall Project Outcome Rating
- Quality of UNDP Implementation Implementing Agency (IA)
- Quality of Execution Executing Agency (EA)
- Overall quality of Implementation / Execution
- Sustainability of Financial resources
- Socio-political Sustainability
- Institutional framework and governance sustainability
- Environmental sustainability
- Overall likelihood of sustainability

The completed Required Ratings table (as found in the TE Guidance) must be included in the evaluation executive summary. The obligatory rating scales can be found in the TE Guidance. A full recommended report outline can be found in the TE Guidance.

The other aspects to be included in the evaluation are:

Project Finance and Co-Finance:

The Evaluation will assess the key financial aspects of the project, including the extent of co-financing planned and realized. Project cost and funding data will be required, including annual expenditures. Variances between planned and actual expenditures will need to be assessed and explained. Results

from recent financial audits, as available, should be taken into consideration. The evaluator(s) will receive assistance from the Country Office (CO) and Project Team to obtain financial data in order to complete the Required Co-Financing Table (as found in the TE Guidance), which will be included in the terminal evaluation report.

Mainstreaming:

UNDP supported GEF financed projects are key components in UNDP country programming, as well as regional and global programmes. The evaluation will assess the extent to which the project was successfully mainstreamed with other UNDP priorities, including poverty alleviation, improved governance, the prevention and recovery from natural disasters, and gender.

Impact:

The evaluators will assess the extent to which the project is achieving impacts or progressing towards the achievement of impacts. Key findings that should be brought out in the evaluations include whether the project has demonstrated: a) verifiable improvements in ecological status, b) verifiable reductions in stress on ecological systems, and/or c) demonstrated progress towards these impact achievements.

Conclusions, Recommendations & Lessons:

The evaluation report must include a chapter providing a set of conclusions, recommendations and lessons.

The main phases of the terminal evaluation are as follows:

i. Preliminary Document Review

 The evaluation team will carry out a preliminary documentation review which is expected to help the team to identify the evaluation questions and indicators to guide the evaluation process.

ii. Inception Phase

The international consultant is expected to support the drafting and submission of an inception report based on the documentation review and proposed the evaluation structure (evaluation matrix, evaluation questions, indicators, sources of information and collection methods to be used). The report will include the sites selected for the field visits in the municipalities, proposed field mission timetable based on the selection of sites and stakeholders to be interviewed in the field, an updated work plan for the evaluation process, and interview protocols designed for each of the different type of stakeholder to be interviewed.

iii. Field Mission in Timor-Leste and Presentation- Initial Findings

- Conduct field mission in Timor-Leste, facilitate meetings and conduct interviews with stakeholders and beneficiaries in Dili, Ailieu, Ainaro, Manufahi and Ermera Municipalities.
- At the end of the field mission, the evaluation team will facilitate a comprehensive mission debriefing in UNDP Timor-Leste Country Office providing the initial findings and recommendations from the evaluation mission.

iv. Draft Evaluation Report:

- Prepare and submit the Draft Final report in English within 3 weeks of completion of the field mission detailing the key findings and recommendations which should be submitted to UNDP Timor-Leste and UNDP GEF RTA.

v. Terminal Evaluation (Final) Report.

The final report should be submitted within 1 week of receiving comments from UNDP CO, UNDP GEF RTA, Government counterparts and other key stakeholders. When submitting the final report, the evaluator is required also to provide an 'audit trail', detailing how all received comments have (and have not) been addressed in the final evaluation report.

G. IMPLEMENTATION ARRANGEMENTS:

The principal responsibility for managing this evaluation resides with the UNDP CO in Timor Leste. The UNDP CO will contract the evaluators and facilitate travel arrangements within the country for the evaluation team.

The consultant will report to a responsible officer of Sustainable Development Unit of UNDP Timor Leste. UNDP project team will facilitate administrative arrangements and logistical support including providing the international consultant with support for coordinating and facilitating the in-country mission and field visits. The evaluation mission consultants will be provided office space in the DARDC project office, transportation to the municipalities outside of Dili, and related logistical support for implementation of project activities. Field visit and travel will be required to the municipalities.

The evaluation team will be composed of 2 evaluators (1 international consultant and 1 national consultant). The international consultant/evaluator will be designated as the team leader and will be responsible for finalizing the report. The international consultant is responsible for supervision of the work of the national consultant (during entire evaluation period).

H. DELIVERABLES

The evaluation team is expected to deliver the following:

- Inception Report: Evaluator provides clarifications on timing and method, Evaluator submits to UNDP CO no later than 2 weeks before the evaluation mission
- Presentation of Initial Findings: Evaluator submits to project management and UNDP CO at the end of evaluation mission
- Draft Final Report: Full report (per template provided in TE Guidance) with annexes, Evaluator submits to CO within 3 weeks of the evaluation mission, reviewed by RTA, PCU, GEF OFPs
- Final Report: Revised report, Evaluator submits to CO within 1 week of receiving UNDP comments on draft
- *When submitting the final evaluation report, the evaluator is required also to provide an 'audit trail', detailing how all received comments have (and have not) been addressed in the final evaluation report.

Timeline for implementation

No	Deliverables/ Outputs	Estimated Time to Complete	Target Due Dates	Review and Approvals Required
1	Inception Report	4 days (desk review – home based)	April 5, 2019	Approval by UNDP,
2	Presentation - Initial Findings	12 days (In-country mission)	25 April, 2019	PM/CTA DARDC Project
3	Draft Final Report (per annexed template) with annexes	7 days (home based)	10 May , 2019	
4	Final Report – incorporating all comments received on the draft report	2 days (home based)	30 May, 2019	
	Total days	25		

Schedule of Payments

The payment will be made based on the deliverables. The selected IC must submit documents as per deliverables which must be duly approved and serve as the basis for the payment of fees. The consultant will be expected to produce the following deliverables within the agreed timeline of this TOR to be reviewed and approved as specified in the TOR.

No.	Deliverable/Output	Target Due date	Percentage disbursement
1	Submission and acceptance of Inception Report	5 April, 2019	10%
2	Submission and approval of the 1st draft terminal evaluation report	10 May, 2019	40%
3	Submission and approval (UNDP-CO and UNDP RTA) of the final terminal evaluation report	30 May, 2019	50%

I. DUTY STATION

This is a home based assignment with travel to Dili, Timor-Leste. The consultant will be required to travel to municipalities outside Dili as well.

J. LANGUAGE OF THE SPECIFIC CONTRACT AND DELIVERABLES

The language of this specific contract shall be English. All reports are to be submitted in English unless otherwise stated.

K. SUBCONTRACTING

Subcontracting under this contract is not allowed.

L. COMPETENCIES

CORPORATE COMPETENCIES:

- Demonstrates integrity by modelling the UN's values and ethical standards;
- Promotes the vision, mission and strategic goals of UN/UNDP;
- Displays cultural, gender, religion, race, nationality and age sensitivity and adaptability;

FUNCTIONAL COMPETENCIES:

- Ability to lead strategic planning, results-based management and reporting;
- Builds strong relationships with clients, focuses on impact and result for the client and responds positively to feedback;
- Consistently approaches work with energy and a positive, constructive attitude;
- Demonstrates good oral and written communication skills;
- Demonstrates ability to manage complexities and work under pressure, as well as conflict resolution skills.
- Capability to work effectively under deadline pressure and to take on a range of responsibilities;
- Ability to work in a team, good decision-making skills, communication and writing skills.

Evaluation consultants will be held to the highest ethical standards and are required to sign a Code of Conduct upon acceptance of the assignment. UNDP evaluations are conducted in accordance with the principles outlined in the UNEG 'Ethical Guideline for Evaluations.'

M. REQUIRED SKILLS AND EXPERIENCE

Education:

Advanced post-graduate university degree in natural resources, environmental studies, developmental studies, rural development, public policy, climate change, or other closely related field OR Undergraduate university degree with relevant combination of professional training, certification and experience may be accepted in lieu of the advanced university degree.

Experience:

- Minimum 10 years professional experience in climate change adaptation, DRM, rural development, gender sensitive evaluation and analysis with experience working and conducting evaluations with UNDP and GEF.
- Previous experience with results-based monitoring and evaluation methodologies;
- Technical knowledge in the targeted focal area(s): climate change, climate change adaptation, disaster risk management, rural development, local governance, rural livelihood and resilience
- Broad experience working in Timor-Leste and considerable knowledge of the local context.

Language requirements:

• English Language required with good written and oral communication skills. Working knowledge on Portuguese, Tetun and/or Bahasa Indonesia would be an asset.

N. FINANCIAL PROPOSAL

The financial proposal must be expressed in the form of an "all-inclusive" lump-sum amount, supported by breakdown of costs as per template provided. The term "all inclusive" implies all cost (professional fees, travel costs, living allowances etc.) Under the lump sum approach, the contract price is fixed, regardless of changes in cost components.

For duty travels, all living allowances required to perform the demands of the TOR must be incorporated in the financial proposal. A total of around 6 travel days will be required to the four focus municipalities' during the period of the assignment with approximately 4 of these may require overnight stay.

O. RECOMMENDED PRESENTATION OF OFFER

- Letter of application with duly accomplished Letter of Confirmation of Interest and Statement of Availability for the entire duration of the assignment;
- Personal CV and P11 Form, indicating all past relevant experience, as well as the contact details (email and telephone number) and three (3) professional references;
- Brief description of why the individual considers him/herself as the most suitable and how they will approach and complete the assignment;
- Financial Proposal that indicates the all-inclusive fixed total contract price, supported by a breakdown of costs, as per template provided by UNDP.

P. CRITERIA FOR SELECTION OF BEST OFFER

Individual consultants will be evaluated based on a cumulative analysis:

When using this weighted scoring method, the award of the contract should be made to the individual consultant whose offer has been evaluated and determined as:

- a) Responsive/compliant/acceptable, and
- *b)* Having received the highest score out of a pre-determined set of weighted technical and financial criteria specific to the solicitation.
 - * Technical Criteria weighting: 70%
 - * Financial criteria weighting: 30%

Only candidates obtaining a minimum of 49 points in the technical evaluation criteria would be considered for the Financial Evaluation

Technical Criteria	Maximum obtainable points	Weight Percentage
Education:	15	15
Advanced post-graduate university degree in natural resources, environmental studies, developmental studies, rural development, public policy, climate change, or other closely related field OR Undergraduate university degree with relevant combination of professional training, certification and experience may be accepted in lieu of the advanced university degree.	15	15%
Years of Experience and Knowledge of Sector:	45	45%
Minimum 5 years professional experience in climate change adaptation, DRM, rural development, gender sensitive evaluation and analysis with experience working and conducting evaluations with UNDP and GEF.	20	20%
Technical knowledge in the targeted focal area(s): climate change, climate change adaptation, disaster risk management, rural development, local governance, rural livelihood and resilience	15	15%

Previous experience with results-based monitoring and evaluation methodologies	10	10%
Language requirements:	10	10%
Fluency in in English and excellent communication skills. Working knowledge of Portuguese and/or Tetun desirable for the Team Leader and fluency required for national consultant.	10	10%
Total technical score	70	70%
Financial: 30%	30	30%
Final Score	100	100%

Q. ANNEXES TO THE TOR

Please submit your applications together with all relevant requested supporting documents (including academic qualifications) to the following address:

Procurement Unit United Nations Development Programme UN House, Caicoli Street, P.O Box 558 Dili Dili, Timor-Leste Fax: +670 331 3534 E-mail: procurement.staff.tp@undp.org

The deadline for submitting applications is 15 March, 2019

Only short-listed candidates will be notified. Women candidates are strongly encouraged to apply.

Annex II: Itinerary of Activities of the Final Evaluation Mission

SN	Activities	Date	Venue	Remarks
1	Departure of IC from home country	27 April 2019	Kathmandu	
2	Arrival of IC to Timor Leste and	29 April 2019	PMU	
	meeting with Project Manager			
3	Meeting with National Director of	30 April	Department of	
	Forestry and Basic Hydrographic		Hydrographic	
	Management		Management	
4	Meeting with Head of Department of	30 April	MAF	
_	Reforestation	20.4.11	D	
5	Meeting with Head Department of	30 April	Department of	
6	Meteorology and Climatology	20 A	Meteorolog	
0	Meeting with Director of Natural	30 April	NDMD	
7	Masting with Director Canaral of	20 Amril	Decentroligation	
/	Decentralisation Administrative	30 April	Administration	
	Decentralisation Administrative		Office	
8	Review of documents and information	1 May	Hotel	
9	Director and staffs of Bamboo	2 May	Ramboo Institute	
	Institute and observe Bamboo Institute	2 Widy	Damooo mstitute	
	activities			
10	Visit to Ermore Municipality Monting	2 May	Ermoro	
10	with Secretary and other staffs of	2 Iviay	Municipality and	
	municipal authority and visit project		project sites	
	sites		project sites	
11	Visit to Aileu Municipal and meeting	2 May	Aileu Municipal	
	with president of Municipal authority.		office	
12	Visit Ainaro Municipal	3 May	Ainaro Municipal	
			office	
13	Review of information and	4-5 May	Hotel	
	documents. Preparation of			
	presentation of initial findings			
14	Meeting with Director General of	6 May	Office of Corporate	
	Corporate Service		Service	
15	Meeting with Program Manager of	6 May	UNDP	
	Environment and Sustainable			
16	Development programme			
16	Meeting with Director General of	6 May	Ministry	
17	Environment	(Mari		
1/	Meeting with UNDP CO program	o May	UNDP	
	Sharing of initial findings of			
	Evaluation			
18	Reviewing of documents and	7-9 Mav	Hotel	
	information	. > 1.149		
19	Meeting with National Consultant and		Hotel/Timor Leste	
	IC depart from Timor-Leste		airport	

Annex III: Persons Interviewed

No.	Name	Institution	Designation	Date		
National Level						
1	Shyam K. Paudel, Ph.D.	UNDP Timor-Leste	Chief Technical Adviser, DARDC Project	April 29th 2019		
2	Adolfredo do Rosario Pereira	Ministry of Agriculture and Forestry	National Director of Forestry and Basic Hydrographic Management	April 30th 2019		
3	Adelino do Rosario	Ministry of Agriculture and Forestry	Head of Department for Reforestation	April 30th 2019		
4	Fernando Araujo	Ministry of Agriculture and Forestry	Head of Department for Basic Hydrographic Management	April 30th 2019		
5	Flaviana Fernandes	Ministry of Public Works, Transport and Communication - National Directorate of Meterology and Climatology	Head of Department for Meteorology and Climatology	April 30th 2019		
6	Agustinho Cosme Belo	Ministry of Social Solidarity	Director for Natural Disaster Management Directorate	April 30th 2019		
7	Amandio Paulino Gestao do Rosario de Sousa	Mnistry of State Administration	General Director of Decentralization Administrative	April 30th 2019		
8	Sabino Rua	Bambo Institute	Director	May 2nd 2019		
9	Julio Soares Nobre	Bambo Institute	Bambo Institute's staff	May 2nd 2019		
10	Jaime Maria Gusmao	Bambo Institute	Bambo Institute's staff	May 2nd 2019		
11	Rui Manuel Exposto	Ministry of Social Solidarity	General Director of Corporate Service	May 6th 2019		
12	Felisberta Moniz da Silva	UNDP Timor-Leste	Program Manager for Environment and Sustainable Development Programme	May 6th 2019		
13	Auxiliadora Dos Santos	UNDP Timor-Leste	Program Analyst for Resilience Building Unit	May 6th 2019		
14	Joao Carlos Soares	Secretary State of Environment	General Director of Environment	May 6th 2019		
Erme	ra iviunicipal	Ermora Munisinal Authority				
15	Danilo Osorio Maldini Babo	Office - Ministry of State Administration	Secretary of Ermera Municipal Authority	May 2nd 2019		
16	Constantino Exposto	Ermera Municipal Authority Office - Ministry of State Administration	Director of Municipal Planning Agency	May 2nd 2019		
17	Felisberto Soares	Manuten Village, Ermera	Chief of Village	May 2nd 2019		
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18	Amaral Salsinha Pinto	Cahaen Group (Bambo Planting Group)	Chief of Group	May 2nd 2019		
19	Jacinto Alves	Group of Community Based Bamboo Value Chain Development in Ermera	Chief of Group	May 2nd 2019		
Aileu	I Municipal					
20	Joao Tilman do Rego	Aileu Municipal Authority Office - Ministry of State Administration	President of Aileu Municipal Authority	May 2nd 2019		
21	Antonio Sarmento	Aileu Municipal Authority Office - Ministry of State Administration	Director of Municipal Planning Agency	May 2nd 2019		
22	Silveiro Amaral Barreto Felis	Banduato Village	Chief of Village	May 2nd 2019		
23	Joao Goncalves	Block and Brick Industry by MHHD Group	MHHD Group Member	May 3rd 2019		
Aina	ro Municipal					
24	Albertino de Araujo	Ainaro Municipal Authority Office - Ministry of State Administration	President of Ainaro Municipal Authority	May 3rd 2019		
25	25 Rosalia Magno Pereira Seewing Group - A Haburas Group		Chief of Group	May 3rd 2019		

Field Visit Summary

Field study mission started from 27nd of April 2018. International Consultant (IC) departed from home on 27nd April and arrived Timor-Leste on 29th April. On the first day IC, had meeting with project manager and National Consultant to discussed mission plans and worked on necessary changes in the plan. On 30th April IC and National Consultant had meeting with Director of Agriculture Department and also with the Director of Forestry Department. On the same day also had meeting with Director of Meteorology Department and also Director of Disaster Risk Management Department. In the afternoon of the same day, team also had meeting with the Director General of Ministry of State General. On the 2nd May IC and National Consultant together with the project staff travelled for project site visits and on the way visited Bamboo value chain program of Ministry of Agriculture where project also contributed especially to community groups with machine to make stripes of Bamboo. Team had meeting with the Director Mr. Sabino Rua and staffs Mr. Julio Soares Nobre and Ms. Jaime Maria Gusmao of the Bamboo institutes. On the 2nd May team had meeting with the Mayor of Ermera Municipality and after that visited project activities like Bamboo Chain Development Group, Irrigation System from Top up grant, and Horticulture activities of Femicultura group. Same day in the afternoon team had meeting with Mayor of Aileu Municipality and after that visited project activities sites in that municipality like Horticulture activities of Moris Foun Group and community Reforestation. On 3rd May, team had meeting with Mayor of Ainaro Municipality and after that visited project activities like water supply, Block and Brick business, Land slide monitoring station, EWS weather station, Sewing group and irrigation program. Team returned Dili by the evening of 3rd. On 4th and 5th team reviewed project documents and information. On 6th May Team had meeting with Mr Rui Manuel Exposto, Director General of Corporate Service, Program Manager of Environment and Sustainable Development of UNDP Ms. Felisberta Moniz da Silva and Program Analyst of UNPD Ms Auxiliadora Dos Santos and briefed on the initial findings. From 7th to 9th May team had reviewed documents and information.

On the 10th May International Consultant left Dili for his home country.

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Annex IV: Evaluation Questions

Evaluation Criteria/Questions	Indicators	Sources	Methodology
Relevance: How does the project related to the main objective of the GEF focal area, and to the environment and development priorities at the local, regional and national level?	 Project objectives and activities related to objective of GEF focal area and priorities at national, local and regional level Consistency and contribution to GEF focal area objectives and to national development strategies Stakeholder views of project significance and potential impact related to the project objective 	 Project documents, report vs GEF document Interview with authorities at different level 	 Project report review in the light of GEF document Interviews with relevant personnel
Effectiveness: To what extent have the expected outcomes and objectives of the project been achieved?	 Level of achievement of expected outcomes or objectives to date Long term changes in management processes, practices and awareness that can be attributable to the project Enhanced capacity of relevant institutions Favourable policies and effective implementation of adaptation activates Participation of women in policy and program formulation Regular dissemination of weather information 	 Change in the ground situation observed. Policy/strategy or program formulation activities included women and their issues incorporated. Policies/strategies/ programs effectively implemented Accomplishment of trainings Institutions strengthened 	 Report with information on effective implementation of activities and strategies Report on intuition setup Interaction with the policy level people to ground level communities and field staffs. Polity document review report. Training report Field verification of activities
Efficiency: Was the project implemented efficiently in-line with international and national norms and standards?	 Reasonableness of the costs relative to scale of outputs generated Efficiencies in project delivery modalities Consistency and contribution to GEF focal area objectives and to national development strategies Changes in project circumstances that may have affected the project relevance and effectiveness 	 Financial statements Project structure and function Project document and annual reports Experience of project staffs and other relevant stakeholders 	 Analysis of financial statements. Analysis of project structure and functionalities Analysis of project circumstances in project document (past and present) Interaction with relevant stakeholders
Sustainability: To what extent are there financial, institutional, socio- economic, and/or environmental risks to sustaining long-term project results?	 Degree to which outputs and outcomes are embedded within the institutional framework (policy, laws, organizations, procedures) Implementation of measures to assist financial sustainability of project results Observable changes in attitudes, beliefs and behaviours as a result of the project Measurable improvements from baseline levels in knowledge and skills of targeted staffs. 	 Project report Observation in the field Interview with stakeholders 	 Review of project reports. Observation in the field to see impact on the ground Interaction with stakeholders
Impacts: Are there indications that the project has contributed to, or enabled progress towards reduced	 Favourable policies/strategies formulated/amended Improved monitoring mechanism Technically capacity of relevant institution strengthened. 	 Project Reports Interview with stakeholders. Observation in the field. 	 Review of project reports/documents. Interaction with local to national level stakeholders.

environmental stress and/or improved	Regular monitoring helped to generate updated information which helped	Field observation.
ecological status?	National Communication and also evidence based planning exercise.	
	 Improved level of awareness made activities sustainable. 	
	Measurable improvements from baseline levels in knowledge and skills of	
	targeted staff/other stakeholders.	
	• Measurable improvements from baseline levels in the management functions of	
	the responsible organizations that were targeted by the project.	
	 Communities benefited from information from early warning 	

Meeting with District based stakeholders

Annex V: Summary Evaluation of Project Achievements by Objectives and Outcomes

The Project logframe in the Project Document was revised in the Inception Report. The present evaluation matrix uses the version contained in the Inception Report.

<u>KEY</u>:

- **GREEN** = Indicators show achievement successful at the end of the Project.
- **YELLOW** = Indicators show achievement nearly successful at the end of the Project.
- **RED** = Indicators not achieved at the end of Project.

HATCHED COLOUR = estimate; situation either unclear or indicator inadequate to make a firm assessment against.

Project Objective: To protect critical economic infrastructure for sustained human development from climate induced natural hazards though better policies, strengthened local DRM institutions and investments in risk reduction measures within the Dili to Alnaro development corridor.

Objective / Outcome	Indicator	Baseline	Target as per ProDoc	Achievement as of May 2019	Rating
Objective: To	2.No of target	2. Capacity for climate	2. MSS, NDMD, DDMCs have	DARDC project developed and conducted	S
protect critical	institutions with	and disaster risk	capacity for climate and disaster	training for capacity enhancement.	2
economic	increased capacity	planning, budgeting	risk management planning	Project also developed an organizational	
infrastructure for	for climate and	and delivery at the	budgeting and delivery at the	strategy for a national disaster database to	
sustained human	disaster risk	national and sub-	national and sub-national (at least	coordinate the knowledge management of	
development from	management	national level is	level 4: Widespread, but not	NDMD (under UNDP-SDRM), NDIEACC	
climate induced	planning,	limited (Level 2:	comprehensive, evidence of	(for UNDP-SSRI) and the national Climate	
natural hazards	budgeting and	Anecdotal evidence of	capacity).	Change Center. NDRM policy revised to	
though better	delivery at the	capacity)		integrate climate change adaptation and	
policies, strengthened	national and sub-			submitted to the government for approval.	
local DRM	national level.			Project also developed a gender strategy	
institutions and				document to recommend sector policies,	
investments in risk				plans and strategies on gender describing	
reduction measures				institutional, implementation modalities	
within the Dili to				and function. Also policy briefs were	
Alnaro development				produced and disseminated to government	
corridor.				staffs of line ministries and institutions.	
				The community driven and gender-focused	
				community action plans were also	

Objective / Outcome	Indicator	Baseline	Target as per ProDoc	Achievement as of May 2019	Rating
				developed focusing measures to reduce the	
				risks and vulnerabilities identified in	
				CVCAs.	
				Six automatic weather stations were	
				installed which are handed over to relevant	
				government department for future	
				management. Training for community	
				leaders and local government to utilise	
				weather information will be conducted in	
				the remaining time of the project.	
				Watershed management plan was	
				developed to address the vulnerabilities of	
				road infrastructure as well as local	
				communities in the DARDC. Project	
				conducted plantation work on the steep	
				areas using fukuoka-style seedballs to	
				rehabilitate larger vulnerable slopes	
				previously damaged by slash and burn	
				agriculture, erosion and other forms of	
				ecosystem degradation.	
Outcome 1: Knowledg understood and availab	e and understanding o le to policy makers, pl	f local drivers of climate-i anners and technical staff	nduced disasters enhanced, and consequences	uent impacts on economic infrastructure better	•

Objective / Outcome	Indicator	Baseline	Target as per ProDoc	Achievement as of May 2019	Rating
Output 1.1: National	- No of targeted	-MSS, NDMD,	-MSS, NDMDs, DDMCs, MAF and	• Assessed capacity of NDMD (MSS),	HS
training facility	institutions with	DDMCs and other	other institutions have increased	DoF (MAF), MSA and MCIE for	
established,	increased adaptive	institutions have	adaptive capacity to reduce risks	developing and presenting training on	
providing services	capacity to reduce	limited capacity to	and respond to climate variability.	DRM and Climate Change adaptation.	
for at least 200	risks of and	reduce risks and		Organizational strategy developed to	
district officials,	response to climate	respond to climate		strengthen INAP's capacity for delivering	
	variability.	variability.	-200 staff and community leaders	training on DRM and Climate Change	
	- No of staffs trained		have received technical training on	adaptation.	
	on technical CCA	-Few staff and	CCA and DRM themes with at least	• Updated and widened extent of the	
	and DRM themes,	community leaders	benefitting 50% women.	portfolio of training modules to include	
	disaggregated by	have received		aspects that are not sufficiently covered	
	gender.	comprehensive		within the current portfolio and both	
		technical training on		CBDRM and DRM manuals are finalized	
		CCA and DRM themes		and approved by the government.	
				Similarly, a comprehensive needs	
				assessment for DRM training was also	
				conducted. DRM training on DRM was	
				conducted to national and district officials	
				benefiting 250 government officials and	
				200 local members trained on CBDRM.	
				• Developed an organizational strategy	
				for a national disaster database to	
				coordinate the knowledge management of	
				NDMD (under UNDP-SDRM), NDIEACC	
				(for UNDP-SSRI) and the national Climate	
				Change Center. Also developed and	
				disseminated knowledge and awareness	
				products documenting good practices for	
				DRM from the national and international	
				project/initiatives. These materials are also	
				available online.	
Output 1.2: National	-Type and no of	-Sector policies,	-Recommendations for at least 3	NDRM policy revised to integrate	HS
DRM policy and	recommendations	strategies and plans do	sector policies, strategies and plans	climate change adaptation and submitted to	
institutional roles	to sector policies,	not explicitly include	that explicitly include climate	the government for approval. Capacity	
extended to address	strategies and plans		change adaptation and DRM.	assessment of NDMD, NDIEACC, MAF	

Objective / Outcome	Indicator	Baseline	Target as per ProDoc	Achievement as of May 2019	Rating
climate change and	for climate change	climate change	-Recommendation for at least 3	and other DRM stakeholders to identify	
disaster risk	adaptation and	adaptation and DRM.	sector policies, strategies and plans	institutional and organizational capacity	
reduction measures,	DRM that	Sector policies,	specifically address the needs of	gaps was conducted.	
including assessment	specifically address	strategies and plans do	women concerning climate change	A gender strategy document	
methods, institutional	needs of women	not specifically address	adaptation and DRM.	developed to recommend sector policies,	
and implementation		the needs of women		plans and strategies on gender describing	
modalities, functional		concerning climate		institutional, implementation modalities	
and technical		change adaptation and		and function.	
capacities and M&E		DRM.		Policy briefs were produced and	
system.				disseminated to government staffs of line	
				ministries and institutions.	
Outcome 2: Subnation	al DRM institutions a	ble to assess, plan, budget	and deliver investments in climate chan	ge related disaster prevention, linked to critica	ıl
economic infrastructur	e and assets in the Dili	to Ainaro development co	orridor.		
Output 2.1:	-Increased in	-Few measures for	Full expenditure of additional funds	• A top-up grant system for local DRM	HS
Capacities of district	amount of funds	community-level	(\$50,000 per district per annum) on	institutions and local administrations was	
and sub-district	delivered on	disaster mitigation are	measures for community-level	developed to increase financial support for	
Disaster Management	climate risk	currently implemented	climate risk reduction implemented	disaster prevention and preparedness	
Committees and	reduction measures	through	through DDMCs/district disaster	activities as well as general resilience	
District Disaster	at the sub-	DDMCs/District	focal points.	measures.	
Operation Centres	national/district	Disaster Focal Points.		• Guidelines and operational manuals	
strengthened to plan,	level.			for the top-up grant system was developed	
budget and deliver				to deliver disaster prevention and	
climate induced	-% of women	-Women are rarely	-50% of beneficiaries of community	preparedness interventions.	
disaster prevention	benefitted from	direct beneficiaries of	level measures for climate related	Support provided to establish	
financing in at least	community-level	measures for	disaster risk reduction and	women's group in each suco/aldeia with	
two districts (eg. For	climate risk	community-level	preparedness are women.	DRM funding and women groups are	
resilient shelter,	reduction	disaster prevention and		implementing community action plan.	
improved grain	measures.	preparedness		• A list of activities were identified for	
storage and seed				intervention and preparedness to reduce	
replacement,				vulnerability of communities to climate	1
windbreaks, storm				induced disasters.	1
drains, small scale				Communities were sensitized through	1
flood protection)				several training sessions on the availability	1
benefitting at least				of financing for disaster prevention and	1
5,000 households.				preparedness and were also involved in	

Objective / Outcome	Indicator	Baseline	Target as per ProDoc	Achievement as of May 2019	Rating
				 participatory community vulnerability capacity assessments. Community driven and gender-focused community action plans were developed focusing measures to reduce the risks and vulnerabilities identified in CVCAs. As per operational manuals of the top-up grant system, money were delivered to community level disaster prevention investments and activities were implemented by the community groups. 	
Output 2.2: Community to district level EWS for climate-induced extreme events designed, tested and installed, with related capacities provided (contingency planning) for at least 5,000 vulnerable rural households, with a focus on women.	-Risk reduction and awareness activities introduced at local levels including: -EWS -Improved resilience of agricultural systems -Erosion control/sustainable land and water management	-Few households currently benefit from risk reduction and awareness activities.	-At least 5,000 households will benefit from risk reduction activities and awareness activities comprising; -EWS -Improved resilience of agricultural system -Erosion control/sustainable land and water management	 Existing status of the early warning and response system was assessed to identify best practices, traditional knowledge, gender considerations and capacity gaps. Based on these information, a model and SOPs for EWS was developed through stakeholder consultation and expert analysis. Also conducted awareness and training campaigns on EWS. Still training for communities to use information from EWS for decision making to protect live, property, agricultural resources and infrastructures from climate induced disasters is remained to complete. Installed six automatic weather stations which functioned for three months and after that stopped functioning. Weather stations were covered with weeds and saplings of the trees. TE consultants informed project manager and also the Director General of the relevant institution and immediate action was taken to clean 	MS

Objective / Outcome	Indicator	Baseline	Target as per ProDoc	Achievement as of May 2019	Rating
				the station area and also communication with the company that installed the weather station was made to address the problem. It is expected that in the remaining time of the project it will be repaired and function as per desired by the project. Weather stations were already handed over to the meteorology department and they should be taking initiation when equipment malfunction but initiation from their side was slow. • Establishment of landslide monitoring in two places were still on-going but not completed. Similarly, of the two water monitoring station, one was complete and establishment of another was still ongoing. Since the project has six months lest, these works are expected to complete.	
Outcome 3: Commun	ity driven investments	implemented to reduce cli	mate change and disaster induced losse	s to critical infrastructure assets and the wider	
Output3.1:Watershed-levelclimatechangevulnerabilityand riskassessmentscarriedoutwithin the DilitoAinaroroadcorridorcoveringat least35sucos,informingdistrictandsub-districtlevelplanning,prioritizationandbudgeting(linked to)	-No of households engaged in climate resilient land use methods and livelihoods (disaggregated by gender)	-Few households have access to resilient livelihood assets and methods (score 2)	-Score improved to 4: By the end of the project, at least 50% of targeted households have engaged in climate resilient land use methods and livelihoods introduced/strengthened in the project.	 Existing data from the WB-BCDRP, UNDP-SDRM and MAF-ALGIS as well as remote sensing imagery were collated to develop a GIS-based database of geographical, geological and land use characteristics of the DARDC. The GIS-based data were integrated with the CVCAs and CAPs to develop watershed hazard and risk maps identifying risk areas posing a threat to road infrastructure as well as economic and livelihood assets. 	HS

Objective / Outcome	Indicator	Baseline	Target as per ProDoc	Achievement as of May 2019	Rating
WB hazard assessments).					
ussessments).					
Output 3.2 : Micro- watershed management plans designed and implemented to deliver community- driven resilience measures for reducing the impacts of climate-induced disasters (flooding and landslides) in vulnerable micro- watersheds along the Dili-to-Ainaro Road Development Corridor, covering at least 50,000 hectares outside of the WB road project RoW.	 -Coverage of land with changed land use conducive to landscape stability, protecting livelihoods and physical infrastructure against climate hazard risks and disasters -% of households that demonstrate an awareness between improved land use and food security/disaster mitigation through their livelihood (disaggregated by gender) 	-Currently lands left behind in shifting, slash-and-burn agriculture are left to recover without intervention and are a major source of vulnerability for communities and the road. -Currently land left behind in shifting, slash-and-burn agriculture are left to recover without intervention and are a major source of vulnerability for communities and the road. -Current understanding of the links between land use and livelihoods, food and nutrition security and disaster is low.	 -At least a quarter of targeted areas of degraded lands reforested or other land stabilization methods applied (eg. Agroforestry, fodder and timber production etc.) while decreasing vulnerability of the DARDC to disasters. -At least 50% of households surveyed confirm a clear link between resource management and resilience of livelihoods and physical infrastructure assets. 	 Provided support to the MAF to integrate the watershed management plans at the local level into the Strategic District Plans and the PDID process. Watershed management plan was developed to address the vulnerabilities of road infrastructure as well as local communities in the DARDC. Also implemented interventions prioritized in watershed management plans. Plantation carried out on slopes using fukuoka-style seedballs to rehabilitate larger vulnerable slopes previously damaged by slash and burn agriculture, erosion and other forms of ecosystem degradation. 220,000 seedballs was prepared and disseminated for reforestation. Information and materials were developed and disseminated to promote public awareness on watershed management approaches to reduce hazards posed by climate induced disasters. National bamboo strategy was developed to promote bamboo for disaster risk reduction along the road corridor and to strengthen the livelihoods of the local communities. The project also supported 10 bamboo groups for bamboo nurseries and plantations in slope lands to prevent 	HS

Objective / Outcome	Indicator	Baseline	Target as per ProDoc	Achievement as of May 2019	Rating
				 disasters and to provide income to the local communities. The project supported Bamboo Institute with a set of bamboo processing machines and 5 community groups received pre-processing bamboo machine sets. These supports increased the production capacity of Bamboo Institute by 3 folds and enhanced the quality of products. 	

Annex VI: Evaluation Consultant Agreement Document

ANNEX E: EVALUATION CONSULTANT CODE OF CONDUCT AND AGREEMENT FORM

Evaluators:

- Must present information that is complete and fair in its assessment of strengths and weaknesses so that decisions or actions taken are well founded.
- Must disclose the full set of evaluation findings along with information on their limitations and have this accessible to all affected by the evaluation with expressed legal rights to receive results.
- 3. Should protect the anonymity and confidentiality of individual informants. They should provide maximum notice, minimize demands on time, and respect people's right not to engage. Evaluators must respect people's right to provide information in confidence, and must ensure that sensitive information cannot be traced to its source. Evaluators are not expected to evaluate individuals, and must balance an evaluation of management functions with this general principle.
- 4. Sometimes uncover evidence of wrongdoing while conducting evaluations. Such cases must be reported discreedy to the appropriate investigative body. Evaluators should consult with other relevant oversight entities when there is any doubt about if and how issues should be reported.
- 5. Should be sensitive to beliefs, manners and customs and act with integrity and honesty in their relations with all makeholders. In line with the UN Universal Declaration of Human Rights, evaluators must be sensitive to and address issues of discrimination and gender equality. They should avoid offending the dignity and self-respect of those persons with whom they come in contact in the course of the evaluation. Knowing that evaluation might negatively affect the interests of some stakeholders, evaluators should conduct the evaluation and communicate its purpose and results in a way that clearly respects the stakeholders' dignity and self-worth.
- Are responsible for their performance and their product(i). They are responsible for the clear, accurate and fair written and/or oral presentation of study imitations, findings and recommendations.
- 7. Should reflect sound accounting procedures and be prudent in using the resources of the evaluation.

Evaluation Consultant Agreement Form

Agreement to abide by the Code of Conduct for Evaluation in the UN System

Name of Consultant: Arun Rijal

Name of Consultancy Organization (where selevant):

I confirm that I have received and understood and will abide by the United Nations Code of Conduct for Evaluation.

Signed at playeondate

Kathmandu, 22.04.2019

Signature:

No.	Description	Edition	year	Total	remarks
		QUARTERLY	' BULLETIN		
1.	Quarterly bulletin	1 st , 2 nd and 3 rd edition	2017	750 pcs of Tetum version and 300 pcs of English version	Distributed to municipalities, communities during events and field visits.
2.	Quarterly bulletin	1 st , 2 nd and 3 rd edition	2018	750 pcs of Tetum version and 300 pcs of English version	Distribute to municipalities, communities during events and field visits.
		BROCH	IURES		
3.	Tips and disaster preparedness	1	2018	400 pcs	Distribute to municipalities, communities during events and field visits and UNDP expo.
4.	Seeds ball Fukuoka technique	1	2018	300 pcs	Distribute to municipalities, communities during events and field visits and UNDP expo.
5.	Gender Policy brief	1	2018	300 pcs	Distribute to municipalities, communities during events and field visits and UNDP expo.
6.	Top Up Grant Mechanism for Strengthening community resilience to climate-induced disasters in the Dili to Ainaro Road Development Corridor (DARDC)	1	2017	200 copies Tetum version & 50 copies English version	Distributed to government partners, communities through project events and for project record
7.	DRM Policy Brief (Draft)	1	2019	50	Ongoing
		BOC	OKS		
8.	DRM Policy	1	2018	70 books	Distribute to government partners,

Annex VII: Project Deliverables

9.	Standard Operating	1	2018-2019	10 books	agencies, local and international NGO's Distributed to
	Procedures and Guideline for Watershed				MAF (DGKPI) and for project archive
10.	Sustainable Land Use and Watershed Management Assessment and Develop Standard Watershed and Land Use Plan and Procedures	1	2018-2019	6	Distributed to MAF (DGKPI) and for project archive
11.	Capacity Assessment Report Timor-Leste	1	2017	4	Distributed to partners and copy for project
12.	Community Agroforestry Guidelines	1	2018	50	Distributed to MAF (DNKPI) and project archive
13.	Synthesis Final Report on Vulnerability Assessment and Community Action Plan	1	2018	5	Distributed to government partners and project record
14.	Gender situational analysis and gender action plan report 2017				
	•	ОТН	ERS		
15.	Warning boards on Landslide, Floods, Fires and Strong wind	4 for Fires hazard, 2 for Floods, 2 for Landslide and 1 for Strong wind	2018 & 2019	9	Located in municipality Aileu, Ainaro and Manufahi
16.	Banners		2015, 2016, 2017, 2018 and 2019	More than 20	Used during PMB meeting, events, workshops, trainings and assessment with government partners
17.	Invitation and other printing		2015, 2016, 2017, 2018 and 2019	More than 20	Used during PMB meeting, events, workshops,

				trainings and assessment with government partners
18.	Project Calendars	2017 & 2018	300 calendars	Distributed to Government partners, donors and UNDP
19.	Stickers	2018		Put on UNDP assets were handed over to government institutions
	Project facebook and UNDP pages for project activities			
	Project highlights in national media during Ministers visits in 2018			
	Posting of project success in Ministry's facebook pages			
	5 minutes video about project			



Annex VIII: Map of Timor-Leste

Annex IX: Evaluation Criteria

Highly Satisfactory (HS)	Project is expected to achieve or exceed all its major global					
	environmental objectives, and yield substantial global environmental					
	benefits, without major shortcomings. The project can be presented as					
	"good practice".					
Satisfactory (S)	Project is expected to achieve most of its major global environmental					
	objectives, and vield satisfactory global environmental benefits, with					
	only minor shortcomings.					
Moderately Satisfactory (MS)	Project is expected to achieve most of its major relevant objectives but					
	with either significant shortcomings or modest overall relevance.					
	Project is expected not to achieve some of its major global					
	environmental objectives or vield some of the expected global					
	environment benefits.					
Moderately Unsatisfactory	Project is expected to achieve some of its major global environmental					
(MU)	objectives with major shortcomings or is expected to achieve only some					
、 <i>,</i>	of its major global environmental objectives.					
Unsatisfactory (U)	Project is expected not to achieve most of its major global environment					
	objectives or to yield any satisfactory global environmental benefits					
	objectives of to yield any satisfactory global environmental benefits.					
Highly Unsatisfactory (U)	The project has failed to achieve, and is not expected to achieve, any of					
	its major global environment objectives with no worthwhile benefits.					

i) Criteria used to evaluate the Project by the Final Evaluation Team

ii) Scale used to evaluate the sustainability of the Project

Likely (L)	There are no risks affecting this dimension of sustainability.		
Moderately Likely (ML)	There are moderate risks that affect this dimension of sustainability.		
Moderately Unlikely (MU)	There are significant risks that affect this dimension of sustainability.		
Unlikely (U)	There are severe risks that affect this dimension of sustainability.		

iii) Rating scale for outcomes and progress towards "intermediate states"

Outcome Rating			Rating on progress toward Intermediate States		
D :	The project's intended outcomes were not delivered	D:	No measures taken to move towards intermediate states.		
C:	The project's intended outcomes were delivered, but were not designed to feed into a continuing process after project funding	C:	The measures designed to move towards intermediate states have started, but have not produced results.		
B :	The project's intended outcomes were delivered, and were designed to feed into a continuing process, but with no prior allocation of responsibilities after project funding	B :	The measures designed to move towards intermediate states have started and have produced results, which give no indication that they can progress towards the intended long term impact.		
A :	The project's intended outcomes were delivered, and were designed to feed into a continuing process, with specific allocation of responsibilities after project funding.	A :	The measures designed to move towards intermediate states have started and have produced results, which clearly indicate that they can progress towards the intended long term impact.		

NOTE: If the outcomes above scored C or D, there is no need to continue forward to score intermediate stages given that achievement of such is then not possible.

iv) Rating scale for the "overall likelihood of impact achievement".

Highly Likely	Likely	Moderately Likely	Moderately Unlikely	Unlikely	Highly Unlikely
AA AB BA BB+	BB AC+ BC+	AC BC	AD+ BD+	AD BD C	D

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