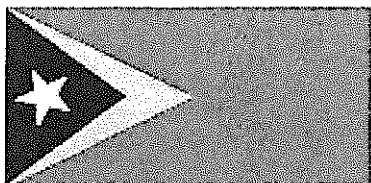


Timor-Leste



Terminal Evaluation of Strengthening the Resilience of Small Scale Rural Infrastructure (SSRI) and Local Government Systems to Climate Variability and Risk

Project Implemented by: Ministry of Commerce, Industry and Environment
and Ministry of State Administration

Project Funded by: Least Developed Countries Fund/GEF and UNDP

Prepared for: UNDP Timor-Leste

Prepared by:

Alan Ferguson, Regional Consulting Ltd.

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Table of Contents

Executive summary	iii
Acronyms and abbreviations	vii
Acknowledgements	viii
 1. Introduction	 1
1.1 Purpose of the evaluation	1
1.2 Key issues highlighted	3
1.3 Methodology of the evaluation	2
 2. The Project and its Development Context	 4
2.1 Project history	4
2.2 Problems that the project seek to address	5
2.3 Immediate and development objectives of the project.....	6
2.4 Main stakeholders	6
2.5 Expected results	7
 3. Evaluation Findings.....	 7
3.1 Project Formulation	7
3.1.1 Project strategy and implementation approach.....	7
3.1.2 Country ownership and stakeholder participation	10
3.1.3 Replication approach.....	11
3.1.4 Cost-effectiveness	12
3.1.5 UNDP comparative advantage	12
3.1.6 Linkages between project and other interventions within the sector	13
3.1.7 Management structure and arrangements	14
 3.2 Project Implementation	 15
3.2.1 SSRI value-added climate resilience elements.....	15
3.2.2 Implementation and coordination issues.....	17
3.2.3 Partnership arrangements	18
3.2.4 Financial planning and co-financing	19
3.2.5 Monitoring and evaluation: design at entry and implementation	23
3.2.6 Execution and implementation modalities.....	23
3.2.7 Management by the UNDP Country Office.....	24
3.2.8 Gender equity.....	25
 3.3 Project Results	 26
3.3.1 Project objective.....	26
3.3.2 Achievement of Outcome 1: Policy, Information and Awareness	26

3.3.3	Achievement of Outcome 2: Integration into Planning & Budgeting	28
3.3.4	Achievement of Outcome 3: Infrastructure Projects	34
3.3.5	Sustainability of project results	36
3.3.6	Impact of the project	38
4.	Rating of Project Performance	38
5.	Lessons Learned	41
6.	Conclusions and Recommendations	43
6.1	Conclusions	43
6.2	Recommendations	47

Annexes

Annex 1: Terms of Reference	51
Annex 2: Evaluation Criteria	57
Annex 3: Interview Guide	59
Annex 4: Itinerary and Interviews	62
Annex 5: List of Documents Reviewed	70
Annex 6: List of Contacts	72
Annex 7: Terminal Evaluation Summary of Project Achievements	74
Annex 8: Status of SSRI Field Projects	79
Annex 9: Evaluation Consultant Code of Conduct Form	87
Annex 10: Evaluation Report Clearance Form	88

List of Tables

Table 1: Main Stakeholders	6
Table 2: Distinguishing features of SSRI approach to climate resilient infrastructure	16
Table 3: Annual Budgets and Expenditures (USD)	20
Table 4: Estimated In-kind co-financing from the Government of Timor-Leste	21
Table 5: List of Training and Workshop Activities	31
Table 6: Project Rating	38

Figure 1: Location of Liquiça, Ermera and Baucau project districts in Timor-Leste..... 2

Executive Summary

Project Title <i>Strengthening the Resilience of Small Scale Rural Infrastructure (SSRI) Project and Local Government Systems to Climate Variability and Risk</i>				
GEF Project ID:	4696		<u>At endorsement (US\$)</u>	<u>At completion (US\$ est.)</u>
UNDP Project ID:	4817	GEF financing: UNDP financing: UNDP in kind:	4,600,000 cash 300,000 cash 1,935,600 (LGSP)	4,900,000
Country:	Timor-Leste	IA/EA own:	1,600,000 in kind 48,429,000 parallel financing	Not fully confirmable
Region:	Asia	Government: Timor-Leste		
Focal Area:	Climate Change Adaptation	Other:	N/A	N/A
FA Objectives, (OP/SP):	Climate Change Adaptation	Total co-financing:	52,265,399	Unknown
Executing Agency:	Min. of State Administration and Ministry of Commerce, Industry and Environment	Total Project Cost:	56,865,399	Unknown
Other Partners involved:	R4D Intl Labour Organisation GiZ GCCA project	Project Document Signature (date project began): Sept. 25, 2013		
		(Operational) Closing Date:	Dec. 31, 2017	Feb. 28, 2018 revised

Strengthening the Resilience of Small Scale Rural Infrastructure (SSRI) Project and Local Government Systems to Climate Variability and Risk is a LDCF/GEF/UNDP funded project that provides support to Government of Timor-Leste Ministry of State Administration (MSA) and Ministry of Commerce, Industry and Environment (MCIE) to implement climate-resilient rural infrastructure projects and to develop the capacity for long-term climate change adaptation particularly in the municipal PDIM rural infrastructure programme. The project is organized into three components:

Outcome 1: Policy makers and the public in Timor-Leste are aware of critical climate risks to rural (infrastructure) development and are systematically being informed on up to date evidence-based information on climate hazards through vulnerability assessment and cross government coordination mechanisms.

Outcome 2: Local Administrations integrate climate risks into participatory planning, budgeting and standards of small scale rural infrastructure.

Outcome 3: Small scale rural infrastructure made resilient against climate change induced risks (droughts, floods, erosion and landslides) in Liquiça, Ermera and Baucau districts.

In accordance with GEF requirements, an independent terminal evaluation was commissioned to assess the achievements, performance and lessons of the project. The field mission took place in Oct. 23-Nov. 5, 2017 and involved interviews with project stakeholders and beneficiaries and site visits to selected physical demonstration projects in Liquica and Ermera municipalities.

The outputs under Outcomes 1, 2 and 3 jointly facilitated climate-resilient planning, design and construction of rural infrastructure in the three project municipalities. The broad scope of the project involved four infrastructure sectors (roads, water supply, irrigation, flood protection). The project included developing the capacity of government, construction contractors and NGOs to design and implement climate resilient rural infrastructure and to demonstrate climate resilience in a series of 20 projects under the government's PDIM infrastructure development programme and through 10 community-based project grants to NGOs. The climate resilience included measures to (a) strengthen the quality of construction (in order to better withstand climate extremes) and (b) to use soil bio-engineering and related ecosystem-based micro-watershed management to supplement the infrastructure functions. This approach is highly relevant for Timor-Leste since the design, contracting, construction and supervision processes for rural infrastructure need substantial upgrading as a basis for greater climate resilience.

The Climate Change Adaptation Planning for Rural Infrastructure Development (CCAPRID) was a major effort to demonstrate community-based climate-resilient infrastructure analysis and planning in 30 Sucos (village authorities). The practical, participatory experience of identifying community priorities and proposals was an important technically-oriented approach to building consensus on climate resilience needs and actions. The project also sponsored many training sessions for hundreds of participants. This included training for local contractors, management training for municipal staff, training on GIS and remote sensing, workshop presentation and international visits. Government staff, local contractors and NGOs are now better capable of addressing climate resilience design and improved construction standards based on the training and field experience.

SSRI has significantly advanced climate resilience for rural infrastructure through policy development, new technical guidelines, climate risk analysis, training and technical support and demonstration projects to strengthen government planning and development of climate-resilient infrastructure at national, municipal, Administrative Post (district) and village levels. The TE mission indicated that the outputs were generally delivered as planned. A milestone for the project was the development of a draft National Climate Change Policy and related support to the National Directorate for Climate Change (NDCC).

The project exceeded the targeted 100,000 beneficiaries. The 20 government PDIM projects and approximately 10 NGO community grant projects were completed in a generally timely manner with only a few exceptions, but with substantial PIU staff support. The project staff and management have diligently facilitated implementation under difficult circumstances – broad scope of the activities, major capacity limits of participants, problematic government contracting systems, organisational changes in responsibilities, community reluctance to participate, difficult access to land, unfavorable weather conditions, limited water source data, lack of water for plantations, etc.

The project has therefore achieved important results associated with establishing a profile and protocol for planning climate-resilient infrastructure development and highlighting opportunities for better technical quality of design and construction of infrastructure and use of bio-engineering measures. The introduction of climate resilience in routine government planning and budgeting of rural infrastructure has commenced through established guidelines, new awareness, skills and experience in three municipalities, setting the stage for further development of climate resilient rural infrastructure. The engineering, contractor and NGO staff in the three project municipalities have a better understanding of climate-induced risks to small scale infrastructure works and of adaptation and mitigation measures (planning, design, costing, construction, maintenance). Whether the policy development, training, improved PDIM processes and field experience are sufficient to generate ongoing higher standards of construction quality with effective bio-engineering and to fundamentally change conventional PDIM design, construction and maintenance processes for climate resilience in other PDIM projects is a question that remains.

Recommendations:

Recommendation 1: SSRI project should consolidate the best practices from demonstration projects and provide specific advice to the Government of Timor-Leste on potential

improvements and resources needed for implementation of the climate resilience provisions of the PDIM Planning Manual based on SSRI project experiences.

Recommendation 2: SSRI project should prepare a detailed capacity development plan to scale-up of climate resilience measures to other municipalities, including organisational structure and capacity to oversee such measures, drawing upon an assessment of the current status of PDIM infrastructure development processes in the SSRI project municipalities.

Recommendation 3: SSRI project should undertake a status assessment of the GMF user groups for water supply and distribution facilities at the project sites and provide recommendations to the municipalities on the capacity of these groups to maintain the facilities.

Recommendation 4: UNDP and ILO should prepare a joint summary of the key issues and lessons related to their common experiences with construction contracts for rural roads in Timor-Leste for the attention of the Minister of State for Administration and the Minister of Public Works.

Recommendation 5: UNDP should apply the design and operational lessons learned from the SSRI project to the forthcoming Green Climate Fund project.

Acronyms and abbreviations

AP	Administrative Post
ADB	Asian Development Bank
BOQ	Bill of Quantity
CBDRM	Community Based Disaster Risk Management
CCAPRID	Climate Change Adaptation Planning for Rural Infrastructure Development
DRM	Disaster Risk Management
DRR	Disaster Risk Reduction
EVAS	Environmental Verification, Assessment and Supervision
GCCA	Global Climate Change Alliance
GCF	Green Climate Fund
GEF	Global Environment Facility
GMF	Groupu Manutensaun Fasilidade
GoTL	Government of Timor-Leste
LDCF	Least Developed Country Fund
LGSP	Local Governance Support Programme (UNCDF/UNDP)
M&E	Monitoring and Evaluation
MCIE	Ministry of Commerce, Industry and Environment (former MED) MAF
MED	Ministry of Economy and Development (now MCIE) MoF
Mol	Ministry of Infrastructure (now MPW)
MPW	Ministry of Public Works (former Mol)
MoPWTC	Ministry of Public Works, Transport and Communications
MSA	Ministry of State Administration
MTR	Mid Term Review of SSRI
NAPA	National Adaptation Programme of Action
NDCC	National Directorate for Climate Change (NDCC)
NDIEACC	National Directorate for International Environmental Affairs and Climate Change (MCIE) NDPACE
O&M	Operations and Maintenance
PDD	Local Development Funds for implementation of local plan activities PDID
PDID	Planning and implementation of District Development Investment Plan (now PDIM)
PDIM	Plano de Desenvolvimento Integrado Municipal
PNDS	Programa Nasional Dezenvolvimentu Suku
PPG	Project Preparation Grant under GEF
PIU	Project Implementation Unit
R4D	Roads for Development (Australia DFAIT and ILO)
SKDN	National Development Coordination
SOP	Standard operating procedures
SSRI	Strengthening the Resilience of Small Scale Rural Infrastructure and Local Government Systems to Climatic Variability and Risk (LDCF Project)
WASH	Water, Sanitation and Hygiene
UNCDF	UN Capital Development Fund
UNDP	UN Development Programme
UNFCCC	United Nations Framework Convention on Climate Change

Acknowledgements

The Terminal Evaluation team is grateful to the Ministry of State Administration of the Government of Timor-Leste, UNDP and the Project Implementation Unit of SSRI project for their kind cooperation during the mission. Agostinho Caet provided national consultant support to the mission.

The project staff – Devindranauth Bissoon, Reinaldo da Costa, Nelson Vicente, Bernadete da Fonseca, Ermelinda Amaral and driver Benedito Tilman assisted with project documents, field work organisation and logistics, prepared background materials, and provided very useful comments for the terminal evaluation. The assistance of government staff, consultants and local residents who took the time to meet with us is also greatly appreciated.

1. INTRODUCTION

1.1 Purpose of the Evaluation

The LDCF/GEF project, *Strengthening the Resilience of Small Scale Rural Infrastructure (SSRI) Project and Local Government Systems to Climate Variability and Risk*, has provided support to Government of Timor-Leste Ministry of State Administration (MSA) and Ministry of Commerce, Industry and Environment (MCIE) to implement climate-resilient rural infrastructure projects and to develop the capacity of central and local government for long-term climate change adaptation in rural infrastructure investments.

The SSRI project aims to improve the planning processes for climate resilience of critical small scale rural infrastructure in the three pilot municipalities (formerly called 'districts') of Ermera, Baucau and Liquica, with a primary focus on water supply systems, rural access roads and bridges, reservoirs and irrigation systems, and stabilizing river banks/flood protection. Eight Administrative Posts (AP) (formerly called 'sub-districts') were selected during the district inception workshops, with each AP allocated a total of about USD \$373,919 for both project investments (US\$ 258,754) and for technical support to project planning, resilient design and implementation (US\$ 115,165). Furthermore, *innovation projects* were initiated in selected locations (US\$ 350,000) for improving ecosystem services, to highlight the importance of such services and to create an understanding of their value to overall watershed catchment ecosystem improvement, protection and management.

The SSRI project has three major components:

"Component 1 will support the capture and dissemination of evidence on local climate risks and vulnerabilities for national policy influencing, the development of an overarching climate change policy framework and the establishment of a multi-stakeholder knowledge exchange platform. Component 2 will support the development of climate variability risk and vulnerability assessment tools and the integration of climate risks in local planning, budgeting, infrastructure design, construction and maintenance. This will be accompanied by substantial capacity development measures to strengthen the capacity of Local Administrations and service providers on climate resilient local planning/budgeting processes and infrastructure engineering and implementation. Component 3 will provide incentives for implementation of climate resilient local plans via investment grants for climate resilient small scale infrastructure and ecosystem services, which will directly benefit over 100,000 people. Environmental sustainability and project integration will be achieved through measures to protect ecosystem functions in the immediate vicinity of physical infrastructure covering 50,000 hectares¹, and by providing bio-engineering

¹ Later adjusted to 5000 ha.

within infrastructure designs to improve climate resilience, thereby ensuring greater technical and financial viability and social impact overall." (Inception Report, 2014)

The project focus municipalities (see Figure 1) have high population densities and poverty levels, vulnerable flood-prone coastal conditions, landslide-prone mountainous terrain and areas of high groundwater vulnerability. The vast majority of the population in the selected municipalities depends on unprotected gravity-fed water sources for both domestic use and subsistence, and in some cases, cash crop production (paddy rice and market vegetables). Small scale infrastructure in Timor-Leste is particularly vulnerable to extreme rainfall events, causing erosion, landslides and flash floods as a result of the physical context and poor quality of infrastructure with limited investment in operation and maintenance. Communities frequently become isolated when roads and bridges are damaged by localized extreme events and in the water sector many rural communities are dependent on unprotected wells or springs, as well as other surface water features such as rivers, lakes and streams.

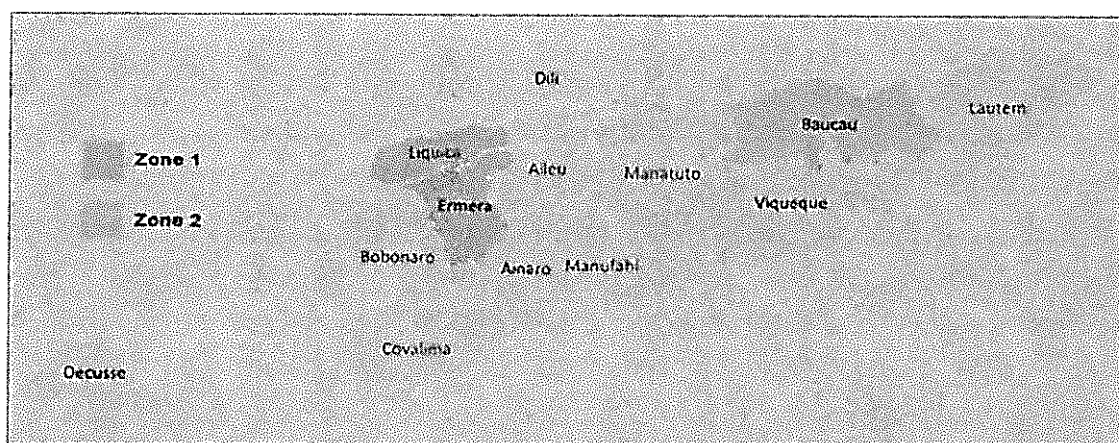


Figure 1: Location of Liquiça, Ermera and Baucau project districts in Timor-Leste

This Terminal Evaluation is an independent review prepared in accordance with UNDP-GEF guidelines, of the progress made in achieving expected project outcomes; the relevance, effectiveness, efficiency and timeliness of project implementation; the issues requiring decisions and actions; and the lessons learned about project design, implementation and management. The objective of the evaluation is to provide a comprehensive and systematic accounting of performance, and assess project design, implementation, likelihood of sustainability and possible impacts. The Terms of Reference specify that the evaluation is to conform to the *Guidance for Conducting Terminal Evaluations of UNDP-Supported GEF-Financed Projects*, (UNDP Evaluation Office, 2012) and to address five main evaluation criteria: Relevance, Effectiveness, Efficiency, Sustainability and Impact. The Terms of Reference are presented in **Annex 1**.

1.2 Key Issues Highlighted

Discussions during the start-up of the TE mission identified some of the key issues that have affected project implementation and that needed to be considered during the Terminal Evaluation:

- **The project strategy and assumptions** to achieve the expected outcomes and the means of monitoring implementation toward clearly-defined results.
- **Extent of institutional capacity development** to integrate climate risk into participatory planning, budgeting and standards of rural infrastructure development.
- **Inter-ministerial coordination particularly at the national level** to support the implementation of the project in achieving the stated objectives.
- **Training and awareness-raising effectiveness** to increase knowledge and skills of local authorities, community representatives and contractors.
- **Sustainability of completed infrastructure projects** and level of community commitment to maintaining the facilities.
- **Recognition and dissemination of best practices and replication** of climate resilience measures in rural infrastructure projects.
- **Implications for improved standards** for climate-resilient rural infrastructure.

1.3 Methodology of the Evaluation

The evaluation methodology was based on (a) review of documents, reports that describe progress on project outputs, outcomes and objectives as per indicators in the project design, (b) self-assessment of project achievements by project staff, (c) interviews with project participants and stakeholders to verify achievements and to identify issues related to project design and implementation, (d) group discussions to review project experiences and lessons learned, (e) site visits to compile evidence of local achievements and to consult with beneficiaries and stakeholders, (f) triangulation and corroboration of comments by participants regarding project results, implementation and lessons.

The evaluation tasks included:

- Preparation of an Inception Report, presenting the methods, issues, evaluation criteria and questions and the timetable.
- Data compilation will be initially undertaken by completing background tables, with the help of project staff, on deliverables, achievements and finances.

- Interviews with project beneficiaries and participants and project management and partners, for the field level, assisted by an Interview Guide (see **Annex 4**); and
- Field review of selected project sites and comparative before and after information, as available, on the key project interventions to assess results.

An emphasis was placed on collegial and constructive dialogue and compiling reliable observations project performance and lessons. The interviews will be assisted by an Interview Guide which will provide lead questions that facilitate consistency and triangulation of responses from those interviewed. The evaluation involved an objective and independent review of the *weight of evidence* compiled from reports, interviews/group discussions and site visits. Reasons for conclusions, ratings and recommendations were provided based on the evidence. The evaluation also drew out key lessons from the project that have implications for follow-up action, potential extension and for future climate change adaptation projects.

Project Relevance, Effectiveness, Efficiency, M&E systems, Sustainability and Impact were rated in accordance with the UNDP/GEF evaluation guidelines. The report is presented as per the outline provided in the GEF evaluation guideline (Mainstreaming and institutional capacity development are considered under Outcome 2).

2. THE PROJECT AND ITS DEVELOPMENT CONTEXT

2.1 Project History

More than half of all villages (Sucos) in Timor-Leste are extremely vulnerable to natural hazards and climate change.² The SSRI project selected three project municipalities - Baucau, Liquiça and Ermera due to their high vulnerability to climate risks related to flooding, landslides, groundwater depletion and the generally poor and declining condition of rural infrastructure. Field visits and consultation by the PPG team during the project design in March-November 2012 confirmed that the institutional and financial capacity of Local Administrations and communities to adapt to the situation is weak. This included the ability of district planning officials, engineers and decision makers to identify areas that are critically vulnerable to climate hazards, to draw the links between ecosystems management and infrastructure development, and to identify, appraise, prioritize, design and budget for resilience measures. The climate induced problem that the project seeks to address is that Local Administrations, particularly in drought prone areas and areas vulnerable to extreme rainfall events, are finding it increasingly difficult to supply and maintain critical small scale

² Tavares M, Gomes M, Fernandes R and Gusmão M (2014) Timor-Leste's Initial National Communication <http://unfccc.int/resource/docs/natc/tlsnc1.pdf>

rural infrastructure for rural communities, leading to measurable reductions in household income as well as increased food insecurity and health issues.

The project planning included a novel Institutional Context Analysis (ICA) centering on an expert panel's review of the project, designed to ensure that institutional barriers and opportunities were understood and built into the design. A national inception workshop was held 26 May 2012 and a final national consultation workshop, November 26, 2012.

The SSRI project was designed as part of the UNDP/UNCDF-supported Local Governance Support Project (LGSP) focussed on participatory bottom-up governance mechanisms, with financial resources transferred directly to districts to implement prioritized small-scale community projects. It was noted in the Project Document that participatory processes and consideration of climate hazards and vulnerabilities were still lacking. The SSRI project was embedded in the LGSP project. The LGSP/SSRI Project Board approved on December 12, 2013, the expansion of the Board with new members from the SSRI project stakeholders such as the MCIE and MPW, as well as the Annual Work Plan 2014.

The National Project Director (NPD) of the LGSP became the NPD for the SSRI project in 2013. A National Project Coordinator was approved. An 'International Environment Engineer', was designated as the overall Project Manager of the SSRI project because no suitable and available persons in Timor-Leste were identified in relation to the high qualifications required for the Project Manager.

The project design was further refined during the Inception Phase from November 2013 to March 2014, with some of the targets reduced. Additional project elements were added to take into account of discontinuation of the LGSP, which occurred in the middle of SSRI implementation, requiring some modification of the work programme.

2.2 Problems that the Project seek to Address

The Project Document (page 25) identified the climate change risks in Timor-Leste that provide a focus for the project. As a result of the physical pressures from climate change and a combination of poor design and infrastructure standards and the limited investment in operation and maintenance, a substantial number of small scale infrastructure works in rural areas are failing over time. Invariably the rebuilding of lost assets tends to occur in the same exposed locations without climate-resilient designs.

The institutional and financial capacity challenges of local authorities and communities include the ability of district planning officials, engineers and decision makers to identify areas that are critically vulnerable to climate hazards, to draw the links between ecosystems management and infrastructure development, and to identify, appraise, prioritize, design

and budget resilience measures. For example, vegetation and slope stabilization can be introduced in the catchment areas of small scale infrastructure, and additional erosion protection added with a combination of civil works and vegetation (bio-engineering) on slopes and in stream beds. Local Administrations have limited ability to understand and address gender and equity issues.

The climate induced problem that the project seeks to address is that “Local Administrations, particularly in drought prone areas and areas vulnerable to extreme rainfall events, are finding it increasingly difficult to supply and maintain critical small scale rural infrastructure for rural communities, leading to measurable reductions in household income as well as increased food insecurity and health issues.” (Project Document)

2.3 Immediate and Development Objectives of the Project

The **Goal** of the project is: to safeguard development benefits for rural communities from future climate change-induced risks.

The **Objective** of the project is: Critical small scale rural infrastructure is climate resilient designed and implemented through participatory approaches and strengthened local governance systems, reflecting the needs of communities vulnerable to increasing climate risks.

2.4 Main Stakeholders

The project stakeholders included the following:

Table 1: Main Stakeholders

MSA	Ministry of State Administration
	General Directorate for Urban Management
	General Directorate for Decentralization
MCIE	Ministry of Commerce Industry and Environment
	General Directorate for Environment
	National Directorate for Climate Change (NDCC)
	National Directorate for EIA and Pollution Control (NDEIAPC)
	National Directorate for International Environmental Affairs and Climate Change (NDIEACC)
MoPWTC	Roads 4 Development
	National Directorate for Water and Sanitation (DNSAS)
Municipal Authorities	Baucau, Ermera, Liquica municipalities

MoF	Ministry of Finance
MAF	Ministry of Agriculture and Fisheries
ILO	International Labour Organisation
UNDP	UN Development Programme
Water Aid	WaterAid
CARE	Care International
Other Partners	The World Bank, Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), UNWOMEN

2.5 Expected Results

The project had three planned outcomes:

Outcome 1: Policy makers and the public in Timor-Leste are aware of critical climate risks to rural (infrastructure) development and are systematically being informed on up to date evidence-based information on climate hazards through vulnerability assessment and cross government coordination mechanisms.

Outcome 2: Local Administrations integrate climate risks into participatory planning, budgeting and standards of small scale rural infrastructure.

Outcome 3: Small scale rural infrastructure made resilient against climate change induced risks (droughts, floods, erosion and landslides) in at least the 3 Districts of Liquiça, Ermera and Baucau. (Physical Investment Component)

3. EVALUATION FINDINGS

3.1 Project Formulation

3.1.1 Project strategy and implementation approach

The project design was initially based on a four-step framework involving 1) Awareness raising; 2) Targeted Information; 3) Research and development studies; and 4) Mainstreaming. The resulting design in the Project Document involved three components:

1. *Systematic use of climate risk information, with a focus on rural water, and integration into development frameworks* - Systematic data gathering, storage and management or relevant risk information with easy to access by all stakeholders nationally, and ongoing support of the database.

2. *Inclusive planning and budgeting for reducing climate related risks* – Incorporating climate resilience in sub-district and suco level dialogues that support the local planning process, and sensitization and training of community representatives and local officials to the climate risk issues as they relate to local infrastructure.
3. *Physical investment for reducing climate risks* – Rehabilitating or expanding existing facilities at selected sites as well as developing new climate-resilient infrastructure.³

The project design was guided by certain principles that sought to avoid project-based implementation in parallel to national systems, leverage other government and donor collaborators, improve local planning and budgeting processes through bottom-up planning, District strategic plan development and climate resilient infrastructure design, and to limit additional workload for counterparts on project steering and management by looking for synergy with LGSP.⁴

The project strategy was focussed on a) generating data and analysis in support of awareness, policy and planning, b) providing training and related technical assistance to government staff, contractors and NGOs and c) applying climate resilience measures in 20 PDIM projects implemented by local contractors and 17 bio-engineering projects implemented by local NGOs. Direct funding of contractors was provided by the project through UNDP to implement activities as per the project workplan and physical works aligned with priorities set out in PDIM infrastructure plans. The project selected eight Administrative Posts and 30 villages (Sucos) within three municipalities for climate resilience activities, guided by climate risk and vulnerability data and PDIM (formerly PDID) prioritization of infrastructure needs.

There were significant capacities limitations that affected this strategy. For example, the MTR report highlighted the scope and depth of the capacity needs context:

Based on information gathered via the MTR and, in particular, interviews with key stakeholders, we have found that there is a capacity/capability and resourcing deficit throughout the entire PDIM process which needs to be addressed, before training needs are identified, for supporting the SSRI project, and for the long-term strengthening of the PDIM process in the implementation of climate resilient small scale rural infrastructure.⁵

³ SSRI Project Document, 2013, p. 43.

⁴ SSRI Project Document, 2013, p. 48.

⁵ Margaretta Ayoung and Sergio Barreto, Mid-term Review – Final Report, May 2016, P. 31

The TE interviews and site visits provided the following observations about the overall project concept and strategy:

- (a) Improving the current, relatively low standards of construction and maintenance practices is central to the project purpose, although the challenges may not have been sufficiently highlighted in the SSRI Project Document and inception report. The assumptions in the Revised Results Framework at inception noted that the procurement systems of local authorities have problems getting qualified contractors and have weak supervision that does not always ensure good quality work. Capacity limitations apply to not only the introduction of soil bio-engineering (soft engineering) to control slope stability and drainage, but also in the basic capacity to design, budget, contract and construct the infrastructure to an accepted standard. Even where standards are available (e.g., 'Red Book'⁶), they may not be implemented per specifications. Project costing and budgets are often inadequate and contractors and supervisors may be unqualified for the work. As a result, infrastructure deficiencies are a common feature in rural areas.
- (b) There were also some mis-perceptions during the interviews that the project was providing additional resources to fill the public infrastructure development/rehabilitation gaps at selected sites deemed high priority due to climate change, rather than aimed at changing structural weaknesses in the system. The project provided grants for small-scale projects within the PDIM programme not just the additional costs of improving design and construction related to climate resilience of infrastructure investment projects. The challenges of enhancing climate resilience within a substantially deficient construction and contracting process became apparent once the project was underway.
- (c) The strategy of demonstrating climate change-oriented infrastructure planning and implementing through a dispersed set of remote, small-scale projects – e.g., short sections of road repair, individual tube wells, patches of soil and water conservation activity, rather than a more concentrated set of adaptation measures at fewer locations, may have reduced the impact of the demonstrations.
- (d) Capacity development by the project needed to not only mainstream climate resilience into PDIM processes, but also improve the basic quality of engineering designs and construction procedures. Design, costing, procurement and construction processes have historically had significant weaknesses in Timor-Leste. This required continuous, proactive management by the PIU which was necessary to ensure an acceptable level of work

⁶ Government of Timor-Leste, Standard Specifications for Highway, Bridge and Airports, 2005 (updated 2015)

often by unqualified and marginally-qualified contractors. The extent of this capacity deficiency was reiterated throughout the TE interviews and site visits.

- (e) The Capacity Assessment study funded by SSRI included a broad review of capacity issues in municipalities⁷, a task that was to be completed (Outcome 2.4) as part of Component 3 of the UNDP/UNCDF Local Government Support Program (LGSP). This Capacity Development assessment and strategy built upon previous training and support under LGSP Municipal, District and Sub-district level local administrations.⁸ The assessment was completed in mid-2016 and provided a high-level review of climate change and DRR/DRM capacity issues rather than assessment of specific SSRI capacity challenges. Five areas of training are recommended related to Climatic Risk Analysis, Disaster Risk Reduction, Disaster Risk Management, Environment Law and Civil Engineering. Capacity development needs are significant. The baseline institutional barriers (e.g., technical capacity, construction standards, field resources, quality assurance, organisational accountability), to mainstreaming and demonstrating climate risk management under Outcomes 2 and 3 were not well defined in the Project Document.⁹

3.1.2 Country ownership and stakeholder participation

The project has been integrated with the relevant government rural infrastructure programmes, therefore providing national alignment and ownership. It was fully harmonized with the priorities of the current *UNDP Timor-Leste Country Programme* (CPD 2009-2013) and the *Strategic Development Plan 2011-2030*. All of the activities were focussed on strengthening the PDIM (formerly PDID) process related to rural infrastructure, using projects identified as climate risk priorities in the government planning systems.

⁷ J. Vong, National Capacity Development Framework for Strengthening Municipalities to Build Community Resilience in Timor-Leste, June 2017

⁸ E.g. LGSP capacity development included: Design of Capacity Assessment and Development tools for Municipal Administrations; Foundation course in Local Governance implemented in 8 municipalities; Design Advanced course in Local Governance "O draft" Policy input on standardized capacity building training programme, National diagnostic assessment of 7 Ministries and state agencies, Draft Policy on Institutional Strengthening "towards a service oriented public service", Foundation course in Local Governance in several municipalities, and Pilot and implementation of Advanced course in Local Governance in several municipalities.

⁹ The UNDP approach to capacity assessment and development is presented in: UNDP, *Practitioner's Guide: Capacity Development for Environmental Sustainability*, March 2011, UNDP, *Supporting Capacity Development, The UNDP Approach*, June 2008 and.; *Capacity Development: A UNDP Primer*, Oct 2009. UNDP/GEF, in this project and others, seems to have abandoned this comprehensive approach in favour of a primary focus on demonstrating climate-resilient physical infrastructure investments.

The project also used extensive community input to identify the relevant risks and to set priorities for action on climate resilience. This enhanced the level of national and local ownership of project activities.

Yet the interviews also noted that activities were led by the PIU (UNDP contracted staff) located within MSA rather than directly by Municipal authorities which may have also reduced the level of responsibility and commitment of local government staff. SSRI was generally viewed by government interviewees as a separate UNDP-managed government project parallel to other PDIM projects (see modality issues in Section 3.2.4 below).

3.1.3 Replication approach

The general approach to replication was to provide technical inputs into policy and planning documents (PDIM Planning Manual), to train key stakeholders, to demonstrate practical methods on the ground and to disseminate information through publications, videos and workshops. The Project Document stated that “the project will review relevant national codes, standards and guidelines for the design and construction of rural infrastructure, as well as integrate and disseminate climate resilience measures into this guidance for wider replication.”

The Project Fact Sheet also states:

The implementation of the rural infrastructure projects followed the existing PDIM planning processes within the Ministry of State. Resources are allocated from the national Budget for implementation of the annual Municipality Investment Plans/PDIM infrastructure projects. Hence, the climate resilient features and considerations that were implemented under this project can be replicated in other municipalities and on all other PDIM infrastructure projects.¹⁰

The replication is expected to occur through the regular PDIM planning and budgeting system. The project further developed a communications plan following the MTR recommendations and prepared a series of short videos to expand public outreach.¹¹ It was expected that the

¹⁰ Project Fact Sheet: Strengthening the Resilience of Small Scale Rural Infrastructure (SSRI) and Local Government Systems to Climatic Variability and Risks Project 00087262

¹¹ These included: Small Scale Rural Infrastructure (SSRI) Project in Timo-Leste <https://www.youtube.com/watch?v=w1ZMnEclLTO>; SSRI Project engages local NGOs on soil-bio-engineering activities <https://www.youtube.com/watch?v=ky-gmvlZo4w>; SSRI Buruma Road Rehabilitation Project in Municipal Authority Baucau – Timor-Leste <https://www.youtube.com/watch?v=1ezrzw9TgGI>; SSRI Uailili Irrigation Scheme in Municipal Authority Baucau – Timor-

many field projects would provide inspiration for replication within government investments and by NGOs engaged in the project.

It is not possible to determine yet how much replication will actually occur after the project, although local officials and staff of local authorities stated that, drawing upon SSRI experience, they plan to include bio-engineering activities in future projects. (See also discussion in Section 3.3.3 on Outcome 2 results) Infrastructure priorities with climate vulnerabilities have been identified. There are also other programmes (e.g., R4D) that provide support for replication. The project has provided demonstration sites to serve as examples for better quality, climate-resilient designs and construction practice.

3.1.4 Cost effectiveness

It is difficult to assess cost-effectiveness of the project without data on benefits and options and estimates of values of reduced future losses from climate-related events due to use of climate resilience. The project outputs are in line with costs on other GEF projects. Road construction costs on the R4D project are similar to SSRI. Some drag on efficiency may have been created with PIU staff turnover and the remote and dispersed locations of field projects that created high transport and logistical support costs.

There are also some questions about the multi-purpose irrigation projects and whether the expected increase and diversification of agriculture are occurring or are likely to occur commensurate with costs. With regard to the relatively expensive embankment project, the general conclusion from discussion was that, given the dynamics of this river system, options need to be determined in relation to larger scale floodplain management strategies.

Cost efficiencies in project implementation may have been adversely affected by delays in the early stages of the project. The geographic spread of the project demonstration sites also likely contributed to higher operational costs.

3.1.5 UNDP comparative advantage

The strength of UNDP in implementing SSRI included the following:

- UNDP long term relationship in assisting government capacity building;

Leste <https://www.youtube.com/watch?v=LGvfH9bGtZ4>; SSRI Lauala Water Supply Project in Municipal Authority Ermera – Timor-Leste <https://www.youtube.com/watch?v=c-tbBU7Fqak>.

- LGSP (UNDP/UNCDF) provided an initial platform of local government support activities within which climate resilient rural infrastructure was nested;
- UNDP responsibilities for facilitating UNFCCC National Communications and NAPA deliberations compliments the SSRI policy development activities;
- UNDP offers access to international experts rosters and other expertise within the UNDP/GEF network;
- Use of international standards and practices for strengthening climate resilience of infrastructure based on experience with other UNDP climate change projects;
- Support for SSRI scale-up through the preparation of a Green Climate Fund concept paper.

3.1.6 Linkages between project and other interventions within the sector

There were five operational partnerships that provided essential collaboration for implementation of SSRI:

- **UNDP/UNCDF Local Government Support Project (LGSP)** – SSRI was nested within and supported by the LGSP in the initial stages. Some of the baseline data and inputs (Project Document) were drawn from UNDP's involved in LGSP. There was perceived mutual value from linking the LDCF project to the LGSP II. SSRI supported the *Capacity Assessment for Municipalities* as part of LGSP.
- **DFAT Australia/International Labour Organisation Rural Roads Project (R4D)** – complementary labor-based road rehabilitation and development with added ecosystem based approaches and bio-engineering has provided capacity development, shared experiences and maintenance support for the SSRI road projects. SSRI had similar climate-resilient designs to R4D that deviated from conventional practices (introducing application of concrete pavements) in the country and resulted in higher rehabilitation costs per kilometre road length.¹²
- **CARE International** – The climate risk and vulnerability assessment and mapping were provided by CARE under contract to the project. CVCA identified approx.14,000 hectares of degraded hotspot areas affected by landslides and approx.186,548 ha of land affected by erosion that require rehabilitation. CARE was also involved in a related project in 33 villages in Liquica, district *promoting* of climate-resilient livelihoods (e.g. through crop diversification and conservation farming), *enhancing* the

¹² International Labour Organisation, *Final Progress Report of the Roads for Development Program*, 2017.

access to safe drinking water and improved sanitation, *reducing* the risk from erosion and landslides, and *enabling* broader village plans for climate change adaptation.¹³

- **Water Aid** – They have been actively involved with local NGO partners in village water supply development, with the government on establishing water user groups and supporting the Association of Water User Groups. Water Aid has assisted the formulation of water user groups at the project sites with the support of the Water Supply and Sanitation Departments of the municipalities. They normally undertake six-monthly visits up to two years following completion of a project.
- **EU/GiZ Global Climate Change Alliance (GCCA)** - This project is providing livelihood support activities to take advantage of improved water supply and watershed conservation opportunities in some of the SSRI project villages. GCCA facilitates productive use of natural resources to improve adaptation to climate change. GiZ was also involved in development of the participatory climate risk assessment tools developed by CARE International in the early stages of the project.
- **UNDP/GEF-LDCF DARDC project** - implemented by the Ministry of Social Solidarity (MSS), aimed at strengthening the resilience of communities living in the Dili-Ainaro Road Development Corridor to climate-induced disasters such as floods and landslides and reducing the risk of potential damage to road infrastructure. The project included GIS training is to build skills in hazard and risk mapping and watershed management similar to SSRI infrastructure climate risk mapping.

Other informal linkages occurred with the GEF World Bank and ADB projects associated with bio-engineering on road developments and watershed management activities being implemented by UNDP and others. Participation with the Soil Bio-engineering Technical Work Group also contributed to exchange of ideas and experiences.

3.1.7 Management structure and arrangements

The management structure, as set out in the Project Document (Page 106), specified a joint LGSP-SSRI board, chaired by the Minister of MSA. The members of the Project Steering Committee and sub-steering committee comprised MSA, MCIE, and the representatives from the 3 municipalities and UNDP. The National Directorate for International Environment and

¹³ CARE International/Water Aid, *Food, water, rain, risk: the uphill struggle to adapt. Final evaluation of the MAKAS project on community-based adaptation in Timor-Leste*, 2015.

Climate Change (NDIEACC) agreed to serve as lead for the implementation of Outcome 1, which is related to climate risk knowledge management, leading an inter-sector coordination and policy aspects.

The Board meetings were sometimes combined with of the LGSP and the *Sub-national Governance and Development Program* steering committee as part of the integrated management structure. Some of the designated Board members had limited involvement in project implementation and therefore did not attend meetings. The Board was convened to update members on progress rather than address particular implementation issues. Although it was not used to leverage action on policy matters, at the first Board meeting, the Minister of State Administration candidly described the known problems of poor quality within PDID projects and the difficulties with contractor payments, and unexpected natural disasters – factors that also affected SSRI implementation.

The Project Board, established under LGSP as a combined LGSP-SSRI management board, met on at least six occasions (June and December 2014, December 2015, February and September 2016, April 2017). Status of progress was summarized at Project Board meetings and incorporated into LGSP reports. Performance Implementation Reporting (PIR) to UNDP/GEF was completed as required each year.

3.2 Project Implementation

3.2.1 SSRI value-added climate resilience elements

There Project Document does not specify the approach to introducing climate resilience to PDIM projects. However, the CCAPRID infrastructure planning process¹⁴ implemented with local authorities contains the particular steps for integrating climate into the existing government processes, and the capacity development assessment¹⁵ highlighted general weaknesses that SSRI has endeavoured to address. The TE discussions and interviews also identified some of the value-added elements that were provided by SSRI.

14 SSRI Project, Assessment on Climate Change Adaptation Planning for Rural Infrastructure Development in Three Selected Municipality, Baucau, Ermera and Liquica in Timor-Leste.

15 J. Vong, National Capacity Development Framework for Strengthening Municipalities to Build Community Resilience in Timor-Leste, June 2017. These main causes of capacity deficiency in municipalities were identified as: *Skills and Knowledge, Institutional Factors, Leadership and Culture, Accountability, Citizen Engagement, Municipal Development Plan Implementation and Coordination and Collaboration.*

Table 2 summarizes some of the key features of conventional infrastructure projects in comparison the SSRI approach which aimed to strength design and construction quality and to add bio-engineering aspects. (This is a list of the features that SSRI sought to promote; not all of the field projects may have implemented these features) The SSRI approach includes contributions to enhanced engineering design, costing, construction and monitoring tasks and physical differences between projects within and without the SSRI climate resilience elements. This is an indicative rather than detailed list, drawn from discussion with the PIU and government staff, but it reflects the generally higher level of standard that has been pursued in the project in order to address some of the problems associated with the existing infrastructure programmes.

The results from SSRI project interventions are summarized in Section 3.3 below. Further actions to consolidate the SSRI best practices are suggested in the Conclusions and Recommendations.

Table 2: Distinguishing features of SSRI approach to climate-resilient infrastructure

Project features	Conventional rural infrastructure projects in Timor-Leste	Climate resilience contributions provided by the SSRI project
Planning of rural infrastructure projects	Capacity gaps related to a) human resource capacity as climate risk analysis, b) lack of std operating procedures for DRR/DRM, c) few instructions to implement the Environment Law and weak commitment to DRR/DRM. ¹⁶	Technical assistance and training to provide climate risk analysis and priority setting and sensitization to improve construction project design/management and bio-engineering measures
Project design and cost estimates	Lack of rigorous quality assurance in project design, costing and site construction practices. High failure rate in many infrastructure projects is common due to low capacity in design, procurement and construction and quality assurance.	National and international standards applied to designs to provide some level of climate proofing in design and materials, and in regular on-site monitoring and supervision of construction. BOQ includes maintenance provisions.
Engineering contracts and drawings	These are often not to the relevant standards, and informal drawings, specification and contracts are used, according to TE interviews	The design, BOQ, cost estimates and contracts were consistent with standards needed to ensure climate resilience
Construction monitoring, inspection and verification	The oversight functions of government staff vary with personnel, skills and availability or transport and per diems to support staff travel	Short term training was provided and the contract oversight processes were directly implemented and facilitated by PIU staff
Rural roads	Concrete surface and gravel road shoulder	Customized concrete pavement on steep and erosion prone grades

¹⁶ J. Vong, op.cit, 2017, p. 69

	No treatment of slopes and concrete retaining/gabion wall	Vegetated shoulders and embankments to stabilize slopes and reduce runoff
	Concrete drains adjacent to the roadway	Vegetated swales and drainage pits along road sides to detain runoff and enhance infiltration
	Uncertain maintenance	Maintenance responsibilities assisted by R4D programme
Water supply projects	Uncontrolled land use around water source	Protection and planting around the water source is proposed by SSRI
	Water source yield not known and storage not planned in relation to demand; water point sometimes not operating	Water use planning to balance supply and demand and to determine facility specifications; functional water system
	Community maintenance group with limited or no capacity	Community maintenance group established or strengthened; ideally monitoring of performance should be undertaken (not always evident)
River embankment projects	Retaining wall or gabion wall to prevent flooding, often failing due to poor engineering	Compacted backfill behind gabion structures planted with grasses and shrubs to enhance stability
Irrigation system projects	Limited reservoir capacity often unmanaged	Multi-use irrigation systems built to professional standards
	No water user group	GMF committee established in accordance with government policy

3.2.2 Implementation and coordination issues

As noted in Section 3.1.7 above, the structure of the project management directly under the sole auspices of MSA as the local government support agency, was viewed as a constraint for participation by other ministries with some direct responsibilities for infrastructure and climate change sectors. Ministries are apparently reluctant to engage without some form of direct benefit to their programs.

‘Coordination’ between the project and external agencies and amongst level of government was noted several times in the TE mission interviews as an issue. Some complained about a lack of information on progress and insufficient integration of the activities into Municipal programs. This may be mostly an internal government communication issue. SSRI was embedded in PDIM planning but somehow viewed by some as separate from regular duties and without adequate travel support budgets.

Coordination issues within the local government service delivery system were also noted. Grants issued by the central government to Sucos are not coordinated with or assisted by other related infrastructure expertise in the Municipality departments of water supply. For example, technical staff in the municipal water supply department have no knowledge of or technical inputs on water systems installed by Sucos and funded by the central government.

The field projects under Outcome 3 absorbed a lot of the PIU staff attention, especially in regards to:

- ongoing supervision and vigilance on construction contract management
- regular use of Change Orders to address site specific design and implementation
- on-the-job guidance and technical back-stopping to contractors and NGOs

3.2.3 Partnership arrangements

The project implementation involved direct collaboration with government and NGO partners, most notably:

- The integration of SSRI with LGSP based on added value of linking the two projects in achieving and leveraging SSRI outcomes and vice versa and use of joint steering and management arrangements;
- Assessment of climate change risks and vulnerabilities through the services of CARE International who have been directly involved in developing the latest methods and tools for this analysis and mapping;
- Development of climate change policy in collaboration with the National Directorate for Climate Change, MCIE and UNDP leading to validation of the policy document at a workshop in December 2016;
- Support to the Centre for Climate Change and Biodiversity, a joint institution set up by MCIE and Universidade Nacional Timor Lorosa'e (UNTL).
- Support to the National Directorate for International Environmental Affairs and Climate Change for the Climate Change Stakeholders Forum that organized the 1st National Climate Change Adaptation Conference;
- Support for implementation of the climate change NAPA in collaboration with MSA MCIE and UNFCCC;
- Collaboration with various government departments and NGOs (e.g., Oxfam, Besik, Seed of Life, ALGIS) in compiling data to enable MCIE to establish a multi-sector platform for stakeholders;
- Support for AP EVAS teams to include climate resilience and environmental social assessments into the process of identifying, verifying and modifying possible climate resilient infrastructural projects and training of municipalities engineers (EVAS);
- Joint arrangements with ILO-implemented Road for Development (R4D) project in providing advice to government on rural road standards and in transfer of road maintenance on SSRI road projects to the R4D project;
- Coordination with Water Aid on advice to government on development and management of GMF water user groups, and participation in the WASH Forum;

- Addition of a livelihoods component to the irrigation water supply projects through cooperation with the EU/GiZ Global Climate Change Alliance (GCCA) which aims to improve adaptation capacity through the sustainable management of their natural resources and improvement of livelihoods.¹⁷

3.2.4 Financial planning and co-financing

Budgets and expenditures

Table 3 shows project expenditures of approximately \$4.56 M (as of Oct. 31, 2017) on a total budget of \$4.9M USD. This comprises 93% of the operating budget to the end of October 2017. Project management expenses make up 15% of total expenditures. The disbursement rate ranged from 74% - 85% of annual budgets.

The project was administered using the UNDP Direct Implementation Modality (DIM). UNDP directly managed project funds under Outcomes 1 and 2 and the implementation support services and innovation project implementation under Outcome 3. MSA was designated the 'responsible party' to UNDP through a Letter of Agreement for project grants under Outcome 3 in line with PDM (previously PDD) plans.

With regard to financial management, all UNDP/GEF funded expenditures were to be managed and audited in accordance with standard UNDP procedures. Financial audits were not available for review by the TE mission.

Monitoring field progress and managing verification of work completed and approval of payments was a major activity for PIU staff due to the number of contractors, the remote locations and the weak verification processes that existed within government.

Co-financing

The Project Document estimated government co-financing at \$400,000 per year, totalling \$1.6 M although a breakdown of this estimate was not provided. UNDP in-kind co-financing in the Project Document is listed at \$1.953 M but there is also no explanation of how this was calculated or follow-up record keeping.

¹⁷ https://ec.europa.eu/europeaid/tags/gcca-giz_en

Table 3: Annual Budgets and Expenditures (USD)

Outcome	Funds	2013		2014		2015		2016		2017	
		Budget	Expend	Budget	Expend	Budget	Expend	Budget	Expend	Budget	Expend
Outcome 1 (Policy makers and public aware)	GEF	\$ 40,632.23	\$ -	\$ 75,190.00	\$ 36,641.76	\$ 117,570.00	\$ 172,685.65	\$ 155,487.56	\$ 299,609.26	\$ 83,084.41	\$ 83,277.46
	TRAC	\$ -	\$ -	\$ 16,281.00	\$ 14,877.00	\$ 76,969.00	\$ 4,769.80	\$ 19,500.00	\$ 17,250.53	\$ -	\$ -
Outcome 2 (Local Administrations integrate climate risks)	GEF	\$ -	\$ -	\$ 143,670.00	\$ 30,883.45	\$ 53,081.50	\$ 348,004.94	\$ 161,940.68	\$ 200,367.73	\$ 181,434.33	\$ 141,583.33
	TRAC	\$ -	\$ -	\$ 8,000.00	\$ -	\$ 871.00	\$ 870.20	\$ 8,630.00	\$ 9,510.00	\$ -	\$ -
Outcome 3 (Small scale rural infrastructure)	GEF	\$ 25,500.00	\$ 25,699.91	\$ 212,085.00	\$ 147,260.34	\$ 922,750.14	\$ 820,326.88	\$ 1,607,393.85	\$ 1,182,230.25	\$ 837,388.38	\$ 561,471.72
	TRAC	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 72,200.00	\$ 10,870.00	\$ 10,870.00	\$ -	\$ -
Outcome 4 (Project Management)	GEF	\$ 12,412.43	\$ 41,434.23	\$ 374,422.00	\$ 428,731.28	\$ 642,565.26	\$ 3,889.64	\$ 37,555.04	\$ (239,672.44)	\$ -	\$ 249,996.77
	TRAC	\$ -	\$ -	\$ 9,000.00	\$ 18,404.00	\$ 860.00	\$ 860.00	\$ 11,000.00	\$ 10,900.00	\$ -	\$ -
Total	GEF	\$ 78,544.66	\$ 67,134.14	\$ 805,367.00	\$ 643,516.83	\$ 1,735,966.90	\$ 1,344,907.11	\$ 1,962,377.13	\$ 1,442,534.80	\$ 1,101,907.12	\$ 1,036,329.2
	TRAC	\$ -	\$ -	\$ 33,281.00	\$ 33,281.00	\$ 78,700.00	\$ 78,700.00	\$ 50,000.00	\$ 48,530.53	\$ -	\$ -
Grand Total		78,544.66	67,134.14	838,648.00	676,797.83	1,814,666.90	1,423,607.11	1,681,150.33	1,491,065.33	1,101,907.12	1,036,329.28
% Disbursement		85%		81%		78%		88.7%		94%	

It is impossible to accurately assess co-financing provisions because, as is typical in most GEF projects, they are presented as generalized estimates reflecting in-kind support in principle from governments and UNDP, and accepted by the GEF Secretariat on approval. Furthermore, there is no bookkeeping of the government support activities or value of office space in lieu of rent, and monitoring systems do not normally track the value of in-kind contributions in GEF projects.

Despite the uncertainties about in-kind values, **Table 4** provides a rough estimate of the annual co-financing contributions of the government.

Table 4: Estimated In-kind co-financing from the Government of Timor-Leste

Contribution	Est No.	Est Value	Total Annual
Time spent on the project by counterpart agency, steering committee members and other senior government officials 5 ministries x 2 persons	10 persons	\$10,000 per yr	\$100,000
Municipal staff engaged in SSRI-related events, training and PDIM project implementation 4 persons x 3 municipalities	12 persons	\$10,000 per yr	\$120,000
AP staff and Suco officials engaged in SSRI projects 3 persons x 8 APs + 30 Suco officials	54 persons	\$5,000 per yr	\$270,000
Suco officials 1 person x 30 Sucos	30 persons	\$1,000 per yr	\$30,000
Office space and maintenance	12 mths	2000 per mth	\$24,000
			\$544,000/yr

The in-kind contribution of UNDP relative to planned co-financing values has been impossible to calculate with any degree of reliability, but support from UNDP country office and regional support centre in Bangkok and the early contributions of the companion LGSP project no doubt make up the majority of these co-financing contributions.

Parallel financing (related projects that provide indirect or complementary support to the project) was based on UNDP contribution to the IDCF-funded project at \$2,223,600 (Annex 6 in Project Document), while the cover sheet in the Project Document lists Government parallel contribution (PDD1 and BESEK other government infrastructure investment programmes) at over \$48 M USD. No data are available on whether all this parallel co-financing was delivered as planned.

In the view of the TE consultant, all of the major co-financing commitments have been delivered in line with GEF project implementation norms, although a small but important

aspect of government funding of travel per diems for their staff working on the project was an issue since many of them reported that no payment of travel per diems were available (See Section 3.2.5 below). Misunderstanding of travel cost responsibilities was a regular theme in interviews with government staff. Many of the field operational funds expected from the government line agencies for staff travel were not available.

3.2.5 Execution and implementation modalities

The UNDP Direct Implementation Modality (DIM) that was used for the project did not have any extraordinary problems. Some of the following implementation issues were identified in the interviews.

- **UNDP recruitment and procurement** - Identifying qualified personnel and contractors in Timor-Leste was difficult (e.g., communications advisor). Delays in recruitment (up to three months), according to some participants, imposed delays in certain work plans. Complaints were presented to the TE consultants about delay in payment of contractor invoices but according to the project staff these were within UNDP procedures.
- **Contractor selection and performance** - It was stated that about 70% of the contractors did not have the skills and experience to complete the work on their own and required continual guidance and supervision from the PIU. **Annex 8** indicates a few projects with some incomplete work, but the project manager assures that all site projects have now been resolved; e.g., due to weather related issues and site conditions, and the ending of SSRI project, the contractor for Ermera, Manusae Bridge was asked to conclude the works and de-mobilize from site and this allowed the R4D maintenance contract to take effect. The project team considers that the SSRI contractors now have skills and experience and are better able implement climate-resilient infrastructure projects and deliver better quality.
- **Travel and support expenses** – There was some confusion with government staff about expected travel per diems, perhaps because of changes in the approach part way through the project, but more likely due to that fact that government budgets for operational costs were not adequate. According to some government participants, SSRI, unlike other PDIM projects, did not provide for DSA per diems (\$40/day) per government practice and this reportedly acted as a disincentive for full participation. The fuel and maintenance costs for motorbikes, to be provided by local authorities, were also reported to be not forthcoming, further inhibiting travel to the field. Some government staff misunderstood the responsibilities for travel support that was to be provided by their departments.

3.2.6 Monitoring and evaluation: design at entry and implementation

An M&E system is generally expected to have a) indicators that reliably measure and report on progress in activities, outputs and outcomes, b) the ability to effectively track progress relative to targets and schedules, and c) adequate, timely reporting that meets the needs of project managers, stakeholders and donors and provides feedback for adaptive management.

The Project Document presented the main indicators which were later updated in the Inception Report:

Outcome 1: Policy makers and the public in TL are aware of critical climate risks to rural (infrastructure) development and are systematically being informed on up to date evidence-based information on climate hazards through vulnerability assessment and cross government coordination mechanisms.

Indicators:

- Number and type of stakeholders served by the multi-sector knowledge sharing and policy influencing platform of MCIE.
- Number of evidence-based climate change risk/vulnerability assessment reports and policy recommendation documents, timely disseminated through the knowledge sharing and policy influencing platform.
- Number of sectors which have endorsed MCIE's national climate change policy framework and strategy, and which have subsequently translated and/or integrated climate risks in key sector policies

Outcome 2: Local Administrations integrate climate risks into participatory planning, budgeting and standards of small scale rural infrastructure development.

Indicators:

- Climate change vulnerability guidelines and tools developed under the project are accepted by MSA as integral part of local planning and budgeting process (Yes/No)
- Percentage of Sub-districts which use climate change vulnerability assessments and CC adaptation activity identification guidelines/tools as integral part of the local development and planning and budgeting process [AMAT 1.1.1.3]
- Number of (district) engineering and contractor staff in focus Districts with a solid understanding of climate-induced risks to small scale infrastructure works and of possible adaptation and mitigation measures (design, construction, maintenance)

Outcome 3: Small scale rural infrastructure made resilient against climate change induced risks (droughts, floods, erosion and landslides) in at least three Districts. (Physical Investment Component)

Indicators:

- Number of Local Administrations (Districts and Sucos) which invest in climate resilient small rural infrastructure works, including complementary soil and land management measures as integral part of the local infrastructure development process
- Number of people benefiting from climate resilient small scale infrastructure works which are constructed in accordance with climate resilient designs in the three project focus Districts, (target 100,000) [AMAT 1.2.1.2]
- Coverage in hectares of complementary soil and land management measures in 3 Districts, target 5,000 (revised from 50,000).

The project indicators assumed that quantitative evidence of outcome-level results could be collected based on various parameters but some of the indicators simply measure project activities and others proved difficult to use in annual PIR/APR reporting – e.g., number of sectors adjusting their policies to address climate change, or % of districts applying the climate vulnerability assessments and guidelines/tools. Indicators need to be customized to the specific changes that the project outcomes are striving for, such as how planning systems and organisational resources have been modified to implement the new climate provisions in the PDIM manual and to enhanced project design and construction as a results of project support.

The main gaps in the monitoring information relate to:

- Use of CVCA recommendations and maps in a routine manner for infrastructure designs incorporated into proposals under PDIM (formerly PDID) program or other funding;
- Extent to which the SSRI approach (higher construction standards + bio-engineering methods as shown in Table 2) has been adopted by APs and municipalities and Sucos as a result of the training and demonstration projects (follow-up surveys);
- Information on capacity of local authorities independently implement design and construction rigour demonstrated in SSRI field projects.

3.2.7 Management by the UNDP Country Office

The large number of participants involved in implementation and the difficulties of finding qualified personnel required a high level of active management by UNDP. Responses to the detailed recommendations of the MTR and to the many capacity weaknesses and requirements for supervision of construction activities suggested a high level of attention to ensuring field projects were completed as planned. Substantial effort was made to consider and adopt many of the 17 recommendations of the MTR.¹⁸ SSRI is considered a flagship project with the UNDP country program and has received substantial support from management.

Coordination and communication (see Sec 3.2.1) were considered insufficient by some of the government interviewees: lack of information about progress and uncertainty about their particular roles in the project were mentioned. Some stakeholders may have had larger expectations about involvement in the project.

¹⁸ UNDP, Management response to the Midterm Review of “Strengthening the Resilience of Small Scale Rural Infrastructure and Local Government Systems to Climatic Variability and Risk”, 17 August, 2016.

The approach to capacity development based on short-term training and limited assessment of institutional capacities affecting climate change adaptation practices in the context of governance reform could have usefully drawn upon UNDP and UNCDF's experience in other countries which addresses more systemic barriers to building local government capacity for climate change adaptation planning and budgeting.

3.2.8 Gender equity

The project made a distinct effort to engage women in the project activities. It was estimated that 47% of the 1,225 beneficiaries in the CVCA activities were female.¹⁹ In the demonstration projects, slightly more than 50% of the 86,261 beneficiaries were female.²⁰ Female participation was over 28% of the 708 total participants involved in training and capacity development events.²¹

Gender was assessed in the capacity development study and in a specific assessment of gender.²² Several issues were identified including:

No evidence was found of women's participation in the development of infrastructure – i.e. in the design, planning, and management. In the PDIM programme women are often marginalized during the identification, design and implementation of projects (details under *Findings from the Gender Analysis of SSRI project intervention areas*), limiting their full and effective participation, and their voices, concerns and experiences are likely to be unheeded.²³

Four 'key action areas' and outputs during design, construction and operations phases of rural infrastructure projects were identified in the Gender Action Plan. Recommendations focussed on providing female community leaders with leadership training, building and strengthening the technical capacity of women and women's organizations in PDIM issues, ensuring women's rights are being advanced in the rural infrastructure sector, providing gender capacity development training to NGOs, and mainstreaming gender throughout the implementation of the project. These inputs came late in the project implementation.

¹⁹ SRI Tracking Tool for CCA Projects updated 15.09.2017

²⁰ Timor-Leste SSRI Project Beneficiaries Data, 20.10.2017.

²¹ SRI Tracking Tool for CCA Projects updated 15.09.2017

²² Karabi Baruah, *Gender Action Plan -Mainstreaming Gender in Small Scale Rural Infrastructure (SSRI) Project*, Jan. 2017; and *Roadmap on engendering PDIM process with special focus on climate resilient small scale rural infrastructure*, April 2017.

²³ Gender Action Plan, 2017, p. 5

It was noted during the field visits, that women were primary beneficiaries in the water infrastructure projects due to the improved access to clean domestic water supply.

3.3 Project Results

3.3.1 Project objective

The SSRI project aimed to achieve an overall result of: *small-scale climate resilient rural infrastructure designed and implemented through participatory approaches and strengthened local governance systems*. The interviews and site visits indicated that the outputs were generally delivered as planned.

The outputs under Outcomes 1, 2 and 3 jointly provided significant contributions to climate-resilient planning, design and construction in the three project municipalities. The project demonstrated a new climate resilience approach within 20 PDIM demonstration projects and many NGO community projects with extensive support from the project PIU staff. It achieved the project objective of climate-resilient infrastructure at the demonstration sites. Whether the training, improved PDIM processes and field experience are sufficient to generate ongoing higher standards of construction quality with effective bio-engineering in new PDIM projects is a question that remains. Institutional change to adopt new approaches that carry added costs and nonconventional (bio-engineering) methods may take time to become fully established within local government systems that have noted capacity weaknesses.

3.3.2 Achievement of Outcome 1: Policy, Information and Awareness

Outcome 1 anticipated increased awareness of climate risks by policy makers and the public, and systematic information provided on these risks through vulnerability assessments and cross-government coordination mechanisms. This was to include:

- a policy influencing platform of MCIE²⁴,
- five evidence based policy documents and
- endorsement of a climate change policy framework.

Annex 7 summarizes the reported project achievements. The multi-sector knowledge sharing and policy influencing platforms were the Climate Change Adaptation Technical Working

²⁴ "At least 5 platform members from relevant National Directorates and 2 members each from (or one representative organization): Local Administration, Civil Society, private sector, International NGOs, education institutions", Annex 1.

Group (CCA-TWG) and the Centre for Climate Change and Biodiversity (CCCB). National dialogue and information sharing on climate risks was initiated by MCIE along with a National Climate Change Technical Working Group to co-ordinate policy advocacy processes for climate change mainstreaming into different sectors in conjunction with the UNFCCC NAPA process.

A key activity of Outcome 1 was the development of the Centre for Climate Change and Biodiversity (CCCB) which was established in 2014 with support from UNFCCC and SSRI. It serves as a knowledge hub for climate change information and expertise including technical assistance and policy advice. The current functions of the Centre were not reviewed, but the Centre assisted in organizing two national workshops on climate change and disseminating information and data sets. A website was created (but this now seems to be out of order).

Through a contract with CARE International, the project identified climate risks at an overview level and analyzed critical vulnerabilities to rural infrastructure. The Climate Vulnerability and Capacity Assessment (CVCA) process was completed in the three project municipalities and later used to assist local infrastructure planning under Outcome 2. The CVCA Report and 24 Risk Maps for eight APs (sub-districts) along with a final report were published and disseminated. The maps and data are available in digital and printed formats and are accessible to stakeholders and the public at large. In addition, the CVCA study included perception studies from the communities in each of these eight APs at the Suco level (26 sucos). The CVCA study provided support to local government authorities and central government decision makers in planning and policy formulation to improve the quality of climate resilient development and ultimately contribute to the mainstreaming of climate change into local level planning and development.²⁵

A milestone for the project (and UNFCCC activities) was the development of a draft National Climate Change Policy and related support to the National Directorate for Climate Change (NDCC). The project assisted the preparation of draft policy led by MCIE, helped to establish the Climate Change Technical Working Group that provides for cross-ministry cooperation.

The improved awareness and policy outputs from SSRI have advanced the climate change agenda and the heightened the role of climate-resilient infrastructure in local government planning and operations, and in national policies. The key outputs – assistance for development of a functional climate change technical support platform for assistance to local authorities and for effective inter-agency coordination mechanisms have been delivered by the project in conjunction with Timor's other climate change programming. The added

²⁵ SSRI Tracking Tool for CCA Projects, 15-09-2017.

awareness and policy development along with coordination mechanisms should provide greater recognition of climate risks to rural infrastructure in the long term, although the immediate implications for strengthening resources and expertise of local authorities for a climate-resilient approach to higher quality infrastructure investment are less apparent.

Regarding the need for better coordination, the field visits noted that rural infrastructure are sometimes constructed in the same villages under both the PDIM and PNDS (Programa Nasional Dezenvolvimentu Suku) funding programs but the later do not have the benefit of technical assistance from experts at the municipalities. Different standards of construction were said to apply to the two programs. This is a coordination issue that could be addressed in future governance reform.

3.3.3 Achievement of Outcome 2: Integration into Local Planning and Budgeting

Outcome 2 assisted the integration of climate risks into participatory planning, budgeting and standards of small-scale rural infrastructure development. Climate change vulnerability guidelines and tools were to be applied in the eight project APs (sub-districts) and at least 100 district staff and 30 contractor representatives were to have received capacity development.

The model practices that SSRI has been aiming for are summarized in Table 2 of this report. Positive results in the three project municipalities have clearly occurred. The substantial orientation and training on infrastructure design and construction provided to 30 Sucos and eight APs have improved climate-resilient proposals submitted for government funding under direct guidance of the project staff, but the extent and consistency of the progress appears to be variable based on the interviews and site observations at a few project locations.

In 2014, the project provided input to the PDID Planning Manual to include aspects of climate risks to infrastructure. The SSRI proposed changes to the draft PDID manual, later approved, included²⁶:

STEP I:

- Add project related climate change based on the CVRVA Climate Change Risks Assessment report - in relation to PDS (Suco Development Plans)
- Community include a discussion on climate change impacts as part of the agenda for Suco Council meetings on priority setting.

Step II:

- Annex 3 (parts IV and V) : including watershed management, Bio-engineering for landslide / erosion and flood control onto the indicative menu for projects
- Annex 4: One of the top priority three projects should be Climate Change related

²⁶ SSRI Project input to PDID Planning Manual Revision –Revision areas in Planning Steps, Nov. 2, 2014

- Annex 5 : Description of projects at Suco level include aspects of climate change impacts such as landslides, erosion, flash floods on the proposed projects and appropriate mitigation measures thereafter incorporated into assessments and verifications (EVAS process)
- Annex 7 : Description projects at sub district and district levels should also incorporate Climate Change aspects identified at Suco level as part of the justification for prioritisation of a given project

STEP III.

- Annex 9: Include climate change; District Environment Officer (DEO) attend sub-district SKSD meeting since environment sector is not represented at sub district level. DEO will provide technical input on environment and climate change mainstreaming to the SKSD meetings.

STEP IV:

B . Verification

- Composition of EVAS members should include District Environmental Officer as one of the members to ensure technical discussion on environment and climate change issues as cross-cutting issues across all sectors; irrespective of whether there is an environment project or not.
- Including Environmental Impact Assessment (EIAs) and Social Safeguard assessment in the verification and assessment process by EVAS.
- Include *Environmental and climate change risks* (instead of just environmental risks); also add environmental and climate change risks in Annex 11.
- Issues related to land tenure: Need to secure commitment from land owners by way of signing a Land offer or No Objection Form.... *inclusion of this form as annex*

Annex 12: Maintenance and operations

- Include Community Management Action Plan (CAMP) as part of the community roles in basic maintenance by beneficiaries group (a clear written down community management plan , developed through a community participatory process)

STEP VI

- Part A(v) include Climate change information for SKDD meetings to facilitate discussion and decision making taking into account climate risks and their impacts on the infrastructural projects.

In the old PDID manual, the process of setting infrastructure grant priorities was based on important local issues being addressed along with the Verification, Assessment and Supervision (EVAS) Team considering environment risks.²⁷ These new guidelines provide a more comprehensive framework for prioritizing projects related to climate change based on the Climate Vulnerability and Risk Assessments, and encouraging recognition and use of

²⁷ Democratic Republic of Timor-Leste, Integrated District Development Planning (PDID), Guide for Elaboration of District Investment Plans, 2012.

watershed management, and bio-engineering for landslide/erosion and flood control within the project menu. This is a strong first step on *what to* prioritize and *who* to involve. A subsequent step, following from the project experience in applying these steps, might be to include supplementary direction on *how to* design, cost, construct, inspect and maintain the facilities, employing some of the improved construction and management processes identified in the SSRI approach. Under the new manual, a more elaborate verification, environmental review and maintenance procedure is established. Climate resilience of infrastructure requirements are now included in the revised Ministry of State Administration (MSA)'s PDID Planning Manual, Procurement Manual and Decree Law no. 4/2012. SSRI provided training support for implementation of these requirements.

The Climate Change Adaptation Planning for Rural Infrastructure Development program (CCAPRID) in eight sub-districts (APs) provided training and capacity development for members of 30 village (suco) councils involved in planning and developing new proposals for community development. This was a major initiative to create awareness, undertake risk and vulnerability analysis and prioritize infrastructure climate resilience needs. The CVCA mapping under Outcome 1 was applied in the CCAPRID planning exercises to address erosion, landslide and flooding risks. CCAPRID also involved demonstration of watershed soil bio-engineering practices by communities. Participatory exercises were held at the local level to provide a bottom-up approach to setting infrastructure development and rehabilitation priorities and gaining public support.

The CCAPRID contributions were described as follows:

Training and capacity development facilitated for identifying and making annual proposals for infrastructural investments in the villages. Collection of climate related data from the ground and developing the database for climate change risk data for informing policy makers and public in Timor-Leste of the potential climate change risks and its impact on infrastructure, and to integrate and mainstream climate change considerations in to development planning at National, Municipal, APs and village (sucos) Levels. Key inputs were made based on climate change considerations in the Municipality Development Integrated Plan (PDIM) planning guideline/manual for planning and prioritisation of projects to prepare the annual Municipality Investment Plan.²⁸

The training and workshop activities are summarized in **Table 5**. There were 873 participants involved in about 24 training and workshop/meeting events.²⁹ Overall, at least 50 public awareness and advocacy events/activities were reportedly hosted or facilitated, including

²⁸ SSRI Tracking Tool for CCA Projects, 15-09-2017.

²⁹ The total trainees was reported as 708 in the mid-2017 Tracking Tool report.

workshops, conferences, seminars, presentations, joint-monitoring visits, south-south cooperation.³⁰

Table 5: List of SSRI Training and Workshop Activities

Date	Location	Events	Participants (m/f)	Documents & post-training
15-16 April 2014	Dili	EVAS training/workshop	F: 1, M: 67, total: 70	Training report
19 Sep 2014	Dili	KAD members training	F: 6, M:27, total:33	Final report
6-10 Oct 2014	Ermera & Liquica	CAMP workshop in suco level	N/A	Training report
December 2014	Baucau	Training for representatives from local contracting companies, total of 16 companies	F:13, M:57, total: 70	NA
15-16 January 2015	Ermera & Liquica	Municipality of Ermera and Liquica pre-qualified Contractors' Training Workshops	F:13, M: 54, total:67	Training workshop report
20-25 Sep 2015	Vietnam	South-South learning exchange visit to the Promoting Climate Resilient Infrastructure in Northern Mountain Provinces of Vietnam Project (PCRINMP)	F:1, M:8, total:9	Final Report
16-17 Dec 2015	Dili	Training on GIS and remote sensing	F:1, M:13, total:14	Final report on the training
4 May 2016	Dili	Training for Local NGOs on progress reporting, report writing, data collection and using GPS for collecting data and monitoring	F:8, M:19: total:27	Final report on the training
29th April 2016	Dili	Local NGOs - training session for the NGOs reporting (technical and financial reports) and used of GPS to accurately capture and record the coverage (ha.) of bioengineering activities	F:4, M:12, total:16	Final Report
22-24 June 2016	Dili	Project management training for Chief of departments, CDOs, EVAS and representative from national and municipality levels	F:7, M:58, total:65	Final report
25 August 2016	Dili	One day seminar to the local contractors awarded for implementation of 2016 physical infrastructure projects and to DDOs, and EVAS team members	F:3, M:26, total: 29	Final Report on the seminar

³⁰ SSRI Tracking Tool for CCA Projects, 15-09-2017.

Jun/July 2016	Three municipalities Liquica (June 30), Ermera (July 1) and Baucau (July 12)	Pre-qualified Contractors Training - participation of local pre-qualified contractors. The seminar also included participation from EVAS, Chief of PDIM and CDOs.		Final Report
28 July 2016	Dili	Training/workshop for 11 shortlisted local NGOs on concept and activities relating to bioengineering and watershed management with particular focus on small scale rural infrastructure	F:7, M:27, total:34	Workshop report
Aug./Sept. 2016	Dili	Website Management workshop in support of CCCB's website - capacity development to staff from NDCC (2) and CCCB (2) on the development, management and maintenance of the website.	F:2, M: 2, total : 4	Consultant's Final Report
4 Nov 2016	Dili	Progress reporting, M&E - Workshop presentation for 5 local NGOs	F:1, M:14, total:15	Workshop report
November 2016	Marrakesh, Morocco	Support RDTL Delegation (MSA Delegates) to UNFCCC COP 22	M: 2 total:2	
Nov 22-23, 2016		Communication and Behavioral Change Strategy - representatives of local NGOs, media, Chief of Departments, Community Development Officers and EVAS team members	F:14, M:64, total:78 November 22 - 31 participants from local NGO and media partners (F: 6, M: 25) November 23 - for 33 participants from national and local authorities (F: 2, M: 31) November 24 - for 14 core Project staff and key implementation partners including representatives from DARDC, Small Grants Project, Social Business (F: 6, M: 8)	Facilitator's Final Training Report
2015 - 2016	Municipalities of Baucau, Ermera, Liquica	CAMP - establishment and CD/training support to community maintenance groups such as GMFs for water supply facilities and road project Maintenance Groups.		
February 2017	Vientiane, Lao PDR	South South Exchange to Lao PDR - LDCF II Project	F:2, M:5, total:7	Mission Report

10 March 2017	Dili	Workshop presentation report of NGOs activities progress	F:6, M:22, total:28	Workshop report
22 June 2017	Dili	Workshop – presentation of progress report and M&E for 7 local NGOs	F:7, M:21, total:28	Workshop report
May – June 2017	Dili	GIS and Remote Sensing	F:1, M:28, total:29	Facilitator's Final Training Report
January 2016 – June 2017	Municipalities of Baucau, Ermera, Liquica	CCAPRID - Soil-bioengineering training events that were conducted in 13 villages	F:113, M:133, total:246	Final Report
November 2017	Bonn, Germany	COP 23 in a joint side-event presentation with LaoPDR – “Building Partnership for Climate Resilient Rural Development in LDCs” - Support for 2 delegates to participate 1 MSA staff, 1 project staff.	M: 2 total:2	Report

Note: Prepared by PIU staff based on available information from files

In the final year of SSRI, a detailed capacity assessment for municipalities was conducted along with the National Capacity Development Framework for Municipalities (NCDFM) which provides some limited review of climate risk integration into local planning and infrastructure development alongside other governance issues. However, no substantive assessment of the capacity needs to implement the specific SSRI climate resilience approach was provided by the study.

The CVCA guidelines that were developed by the project were applied in planning processes at the village level. The Climate Change Adaptation Planning for Rural Infrastructure Development (CCAPRID) was completed in 30 villages (Sucos) in the eight selected APs, including training of members of village councils. Primary data on the vulnerabilities of rural infrastructure were collected for all of the villages and used to guide investment decisions.

There is no doubt that higher capacity now exists within the project municipalities given the scale and reach of the training and technical support. The engineering, contractor and NGO staff in the three project municipalities have a better understanding of climate-induced risks to small scale infrastructure works and of possible adaptation and mitigation measures (planning, design, costing, construction, and maintenance). The TE interviews indicated that staff and officials of local authorities recognize and support (a) priority setting based on climate risk, (b) better construction and maintenance standards and (c) the advantages of bio-engineering methods. Some of the staff are reportedly now able to produce more reliable project design and BOQ specifications for infrastructure projects. The shift to a more rigorous and professional approach to climate-resilient infrastructure design and development was not well articulated by staff, but the basic principles seem to have been established under

guidance from SSRI project. Interviewees were especially able to describe soil bio-engineering methods now being proposed in new projects.

Whether these substantial advances have been sufficient to fundamentally change conventional PDIM design, construction and maintenance processes remains to be seen. Institutional factors can constrain the ability to fully apply the new approaches and skills to infrastructure investment without external help, and further technical backstopping may be needed in the shift toward higher quality design, construction, and maintenance. However, improvements to climate resilient development plans will gradually occur as a result of the SSRI experiences and PDIM planning guidelines, leading to more effective climate-resilient standards and budgeting processes. Local government staff noted a higher level of technical support and supervision in the SSRI projects compared to their usual projects, which may inspire greater interest in better quality construction.

3.3.4 Achievement of Outcome 3: Infrastructure Projects

Outcome 3 proposed “Various new small-scale infrastructure works constructed in accordance with the new climate resilient designs and additional measures implemented to safeguard existing infrastructure works against climate risks” (Results Framework). Climate proofing designs and Bill of Quantities (BoQ) were prepared by the PIU for 20 PDIM-designated projects as part of the District Investment Plans. The value of each project was originally limited to \$150,000 USD (PDIM Category A projects) in order to maximize the number of projects that can be done and the number of Sucos in which the project can intervene. The projects included infrastructure development and rehabilitation: The Phase I projects cost a total of \$917,906 USD and the Phase II projects, \$944,374 USD.

Vetiver and elephant grass planting was the most common bio-engineering measure associated with roads. **Annex 8** summarizes the general type, location and achievements of each of the 20 projects as of November 2017. Three of the projects were ongoing at the time of the TE mission. The summary of project status in Annex 8 also indicates some projects had failure of the plantation elements due to dry conditions (data on survival rates not available). The largest project was the irrigation system in Lacoliu Suco, costing \$185,866 USD over two phases, and providing for community bathing/washing and expanded irrigation farming. The infrastructure projects that were selected with community input included:

PHASE I

Baucau Municipality

1. Rehabilitation/protection of water source in Wailia
2. Rehabilitation of water supply system – Suco Ossoala
3. Water supply installation project – Aldeia Uatu-ua

4. Construction of new irrigation scheme – Suco Lacoliu
- Ermera Municipality
5. Water supply installation project Suco Talimoro
 6. Water supply installation project Suco Leirema
 7. Water supply installation project Suco Lemeia Kraik
 8. Bridges rehabilitation project in Suco Leguimea
- Liquica Municipality
9. Road rehabilitation (1.6km) – Aldeia Nunuleta and Darulema, Maubalarissa
 10. New river protection (gabion) construction 435m – Kakae River, Lisadilla

PHASE II

- Baucau Municipality
11. Agua water source protection and irrigation (0.8 KM) in Suco Uailili
 12. Rehabilitation of 2.77 km of road in Baruma from Wamutu to Afatahai and Waimatame Suku Baruma
 13. Continuation of irrigation scheme (377 M) at Suco Lacoliu
- Liquica Municipality
14. Rehabilitation of three dug-wells (depth 5 M) in Suco Maumeta
 15. Rehabilitation of road in Suco Dato
 16. Rehabilitation of road in Suco Metagou
- Ermera Municipality
17. Water supply installation project (3 km) Suco Poetete
 18. Water supply installation project (3.5 km) Suco Hatolia Vila
 19. Road construction in Suco Manusae
 20. Water supply installation project in Suco Lauala

The project also provided 12 small grants to ten community-based NGO projects. In two phases from 2015-2017, various interventions were implemented in Ermera, Baucau and Liquica Municipalities. More than 14,792 (629 female) benefited in 42 locations, involving 22,46 ha and approximately 34 ha from “tara bandu” activities.³¹ The activities included check dams to risks areas, terracing, planting trees and grasses along the roads, rural infrastructure, water protection, community awareness through school campaign, Radio talks shows, trainings, workshops and *tara bandu* (traditional) activities.

These projects faced similar challenges as PDIM projects, most notably community reluctance to do voluntary work, expectations of payment to attend workshops, transport of community members to the site, and lack of women’s participation. Some trees and grasses did not grow well due to lack of maintenance, lack of watering, animal grazing, and unsuitability of some of the tree species.³² Time constraints for plant establishment and the longer term needed to monitor results were concerns noted by the NGOs.

³¹ SSRI, *Engaging local NGOs and CBOs in championing innovative solutions for improving the stability and climate resilient of watersheds through bio-engineering intervention*, Final Report, 2017.

³² SSRI, *Ibid*, 2017.

The TE mission made visits to eight projects (**Annex 5 Itinerary**). The following observations were derived from those brief visits:

- Beneficiaries described the effects of the projects on reduced time and drudgery to collect domestic water from afar, fewer conflicts over water, reduced flooding of houses and schools, improved road access during the rainy season, extended irrigated farming and income, and local employment.
- Most of the SSRI-funded PDIM projects appear to have been effectively constructed under the guidance of PIU staff, and involving continual PIU support for all aspects of design, contracting, implementation and payment.
- At many of the sites visited, the emphasis was on hard engineering – new water storage and distribution, road pavements and drainage structures, etc, and less focus on the soil bio-engineering measures.
- There were some roadside plantings that failed due to lack of water (Buruma Road), and some NGO-implemented soil and water conservation measures on steep slopes (Lukulai suco in Ermera, NGO: Fundasaun Malaedoi) where terracing, rainwater trenches and larger up-slope catchment area treatments should have been used to reduce runoff rate on the 23 bamboo check dams.
- The cost-effectiveness of some of projects – e.g., the one floodplain embankment and the irrigation projects need to be assessed if they are to become standard within the PDIM programme.
- For the project field sites visited, there were no monitoring data on the relative performance and experiences with the methods demonstrated at the sites but this may be part of the project completion report.

The projects under Outcome 3 provide practical examples of climate resilience related to higher quality design and construction along with bio-engineering. They can serve as inspiration for replication if the right leadership and incentives are in place within local authorities and appropriate budgets and technical support.

3.3.5 Sustainability of project results

Beneficiaries and government officials indicated that they had established GMF water user groups to manage the improved water supply systems, although many had not yet met, and none that were interviewed had actually paid fees for water although they were anticipating such developments. GMF functions have a high emphasis in the *National Public Water Supply Policy* and local authorities are required to ensure that they are in place. Yet, non-functioning

water taps are also evident in the field at recent PDIM-constructed facilities and neglect of maintenance appears to be a common occurrence. It is not yet clear how reliable the GMF groups will perform.

Six sections of road rehabilitated under Outcome 3 have been turned over to the R4D program of ILO to provide maintenance arrangements and budgets (includes bio-engineering elements). How long the program funding from Australia DFAT and ILO may last is currently unknown but there is an increased recognition that road maintenance budgets of the local authorities are important to community development. An evaluation report on R4D suggests major institutional barriers to sustaining the improved capacity.³³

Similarly, in the water and sanitation sector, a recent review concluded that the key bottlenecks that impede progress in Timor-Leste mainly relate to institutional capacity and absence of technical support services, accountability and incentives for sustaining services, and lack of funding to pay for water supply operations and maintenance, including no user fees charged in the urban sector and no clear strategy to effectively support operations and maintenance in the rural sector.³⁴

Community contributions toward infrastructure development and management also appear to be difficult in Timor-Leste. Community members expected direct benefits and employment with little or no imposition of responsibilities or costs on households. Without local support and effort, facilities can rapidly decline. It has been noted on other projects that “a dependency culture has developed in many of these communities, due to a history of needs-based humanitarian responses and a general perception that Timor-Leste has significant oil wealth and therefore the Government has resources to be shared through direct hand-outs”.³⁵ Labour employment projects for infrastructure such the government “three dollar projects” in rural areas are common. This culture of government employment hampers the community voluntary contributions and ownership of GMFs that is being fostered by local authorities and the central government as part of the decentralisation reforms.

³³ The *Final Progress Report of the Roads for Development Program (2017)* states: “Without Government’s efforts to provide complementary enabling environment for small scale emerging contractor capacity development programs such as streamlining procurement, contracts management and payment processes, all capacity development efforts such as pertains on R4D may not have long-term sustainability.”

³⁴ The World Bank, *Water Supply and Sanitation in Timor-Leste, Turning Finance into Services for the Future*, April 2015, p.iv.

³⁵ Harold Lockwood, Alex Grumbley, and Vincent Casey, *Supporting sustainable water supply services in difficult operating environments: a case study from Timor-Leste*, Water Aid, n.d., p.2

Other aspects of sustainability, including Climate Change Policy, PDIM revised planning guidelines and climate resilience practices that have become established have better prospects of sustainability. But the project results have also depended heavily on an active SSRI project team to ensure effective implementation of field project design and construction. There is a level of uncertainty about the degree to which capacity has developed sufficiently to ensure climate resilience measures on all new infrastructure projects.

The government representative points out that this is a start-up project that is meant to show examples of considering climate change in government infrastructure projects, from which, based on these experiences, the government would be committed to start putting more resources for the same kind of project interventions.

3.3.6 Impact of the project

The project has established a model approach to climate-resilient infrastructure through the introduction of better quality design and construction, use of soil bio-engineering and related watershed conservation methods, new planning guidelines that address climate resilience in infrastructure, training of government and NGO staff and contractors, and demonstrating various types of infrastructure renovation and development projects. This has raised awareness and skills for climate resilience in new infrastructure proposals in the three project municipalities. Further development of the approach will depend upon the ongoing government reform, and the support for compliance with and further refinement of the climate change provisions in PDIM planning guidelines. In addition, the increasing recognition of the economic benefits of climate-proofing infrastructure and use of bio-engineering and ecosystem-based methods along with commitment to proper infrastructure operations and maintenance will play a role in greater consideration of climate resilience.

4.0 RATING OF PROJECT PERFORMANCE

The criteria for rating the project are provided in the UNDP/GEF evaluation guidelines. **Table 6** provides a summary explanation of the reasons for the ratings.

Table 6: Project Rating

Rating Criteria (UNDP/GEF TE)	Rate	Reasons for rating
1. Monitoring and Evaluation		
M&E design at entry	U	The project implementation strategy was not clearly presented with the project document including the focus on improving fundamental construction quality processes for climate resilience. No M&E plan or performance database were

		established and the indicators were not fully tested for use in reporting.
M&E Plan Implementation	MS	No M&E plan or full time officer. Measuring outcome progress against a baseline was weak. However, monitoring and oversight and guidance of activities was extensive and annual reporting met GEF and government requirements.
Overall quality of M&E	MU	The Results Framework M&E strategy was not sufficient to provide for measurement of functional climate information platforms, multi-agency coordination mechanisms, capacity development effectiveness and the institutional changes necessary to support improved construction quality + bio-engineering in infrastructure development.
2. IA& EA Execution		
Quality of UNDP Implementation	S	Weakness in project design (see Section 3.1.1) and M&E systems (see Section 3.2.6) and slow start-up were offset by extra efforts at accelerating output progress in the second half of project and ensuring required oversight and support to contractors and government in the field projects (Outcome 3)
Quality of Execution - Executing Agency	S	MSA provided adequate executive and logistical support even where government organisational changes occurred. The main participants were located in the three project municipalities and the 30 Sucos making coordination a challenge.
Overall quality of Implementation / Execution	S	Reasonable level of effectiveness and responsiveness to challenges, especially given the many capacity constraints and other operational issues encountered by the project.
3. Assessment of Outcomes		
Relevance	R	High degree of recognition of climate risks to infrastructure and problems in the quality of PDIM and PNDIS projects
Effectiveness	S	Generally good achievement in wide array of outputs and targets and the quality of field project implementation, with some exceptions. Systemic effects on the capacity to implement climate-resilient infrastructure within PDIM planning and construction processes focused on a new readiness to implement bio-engineering measures and some improved project design and construction practices by government staff and contractors. Despite demonstration projects that serve as possible models for replication, the capacity constraints on improving the quality of construction of the infrastructure remain substantial and systemic reform of government construction projects may be a long term process.
Efficiency	MS	Most of the work has been completed on time and to a generally high standard based on limited field visits. The small scale and highly disperse interventions with many contractors imposed some inefficiencies in managing the project activities.
Overall Project Outcome Rating	S	Substantive policy, planning systems, information and training and field demonstration projects have established a new approach to climate resilient infrastructure. The project team have diligently implemented the activities but ongoing use of this new approach depends upon government and community

		organisations' capacity to significantly change conventional, low quality design, construction and operational practices.
4. Sustainability		
Financial resources:	ML	There is some support in government for more cost-effective infrastructure and bio-engineering, and increased maintenance. But the level of priority and commitment of staff and resources for climate resilient infrastructure is uncertain.
Socio-political:	L	Recognition of issues with PDIM and PDNS implementation quality is high in government.
Institutional framework and governance:	L	Climate change policy, revised planning manual and project experiences assist sustainability, but project was heavily led by PIU. Decentralisation and governance reforms are pending.
Environmental:	L	The bio-engineering demonstrations appear to have good potential to be self-sustaining at many of the sites, if maintenance measures are implemented. Environmental review of projects was completed.
Overall likelihood of sustainability:	ML	The approaches and methods have been introduced and demonstrated but the institutional commitment and capacity for sustaining progress is still uncertain.
5. Objective	S	The project outputs have been effectively completed, albeit with a high level of involvement of project staff, demonstrating progress toward the objective: "Critical small scale rural infrastructure is climate resilient designed and implemented through participatory approaches and strengthened local governance systems."
6. Impact	Unkn own	The project has introduced a new approach (Table 2) and has raised awareness and skills for climate-resilient infrastructure proposals in the three project municipalities. Further project impact will depend upon ongoing government reform measures, and the support for compliance with and further refinement of the climate change provisions in PDIM planning guidelines.

Rating categories as per the UNDP/GEF Evaluation guidelines:

<p>Outcomes, Effectiveness, Efficiency, M&E,I&E Execution:</p> <p>Highly Satisfactory (HS): no shortcomings Satisfactory (S): minor shortcomings Moderately Satisfactory(MS): moderate shortcomings Moderately Unsatisfactory(MU): significant shortcomings Unsatisfactory(U):major problems Highly Unsatisfactory(HU):severe problems</p>	<p>Sustainability ratings:</p> <p>Likely (L): negligible risks to sustainability Moderately Likely(ML): moderate risks Moderately Unlikely (MU):significant risks Unlikely(U):severe risks</p> <p>Relevance ratings: Relevant (R) Not relevant(NR)</p>
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5. LESSONS LEARNED

The following are key lessons for future projects based on review of the SSRI project experiences. They represent the views of the TE consultant:

1) Provide a well-defined project theory of change

Rural infrastructure projects face a host of complicated problems related to ineffective design and procurement, under-qualified and under-resourced contractors, unrealistic budgets, insufficient supervision and accountability, bureaucratic delays, poor quality work, cost overruns, and unreliable operations. Addressing such problems requires systemic change in government, reform and modernisation. Project implementation needs a realistic roadmap that addresses the root causes of the problems.

2) Mainstream into existing structures and programmes

Modifying and refining existing processes that integrate climate change adaptation into established development planning and budgeting systems is the central strategy for promoting uptake of climate risk management concerns. The SSRI project was designed to be part of the PDIM local government infrastructure development programme and thus to encourage sustainability after the project ends.

3) Maximize opportunities for integrated, multi-agency collaboration

The cross-cutting nature of climate change action requires multi-sector partnerships to generate cooperation and momentum for climate resilience across government and within communities. SSRI was sometimes viewed as primarily an MSA project. Functional coordination mechanisms are needed for cross-departmental collaboration, an issue that occurs in all countries, and platforms for sharing information and technical support need to demonstrate their utility in climate and disaster risk management.³⁶

4) Facilitate community participation and commitment

The reluctance of communities to provide voluntary contributions and the often adversarial and politicized environment within which infrastructure projects take place at the local level in Timor-Leste need to be anticipated during project formulation. Many of the interviews described difficulties getting community agreement on project proposals, disputes over

³⁶ E.g., SSRI funded a new water system for an orphanage in Lauala, Ermera Municipality. Coincidentally, a new community water system has been installed nearby under a suco PNDS infrastructure program but it was not operating at the time of the field visit due to a problem at the source. Municipal water and sanitation staff stated they are not aware of or permitted to assist PNDS projects funded by national grants to sucos, many of which they report, lack technical oversight and have limited operational life. This is a governance coordination problem that future UNDP projects could address.

access to water, lack of community voluntary contributions and requirements to hire local labour and war veterans.

Some community NGO projects found it difficult to mobilize community support. Other community-based adaptation projects suggest that programmes need flexibility in addressing deeper operational constraints of local government partners.³⁷ Greater emphasis should be given to community contributions and ownership, leadership and support, including consideration of the targeted beneficiaries/gender, discussion of design options, and various means for regular communication and dispute resolution within the community.

5) Secure resources for government staff field support

Governments often do not have the financial and other resources to support staff field work despite assurances in the project agreement. Limitations in field supervision by municipal staff was attributed to “no fuel for motorbikes” and slow or no payment of ‘transport fees’ (DSA). This is an issue affecting support and incentives (per diems) for field activities by government staff. It needs to be sorted out early in the project, possibly by setting up a dedicated travel expenses account in the counterpart agency, with or without project cost-sharing.

6) Plan for rainfall variability and selective timing of construction and planting

Timor-Leste has a high level spatial and temporal variability in rainfall patterns that is increasing with climate change. The timing of plantations during the rainy season and the preparations for watering if rains fail are important for effective bio-engineering. Follow-up monitoring, weeding, thinning, fertilizing and gap filling are often necessary to ensure plant survival and effectiveness of soil and water conservation to stabilize hillsides. Storm events also make construction more difficult. The lesson is to be prepared for uncertain weather and to ensure careful scheduling of physical activities.

7) Include gender mainstreaming action at an early stage

The gender assessment and roadmap for integrating gender in climate resilient infrastructure development provide useful guidance for more relevant and targeted gender equity provisions. These came late in the SSRI project (which contained several gaps in this aspect)

³⁷ The MAKAS project that CARE and WaterAid implemented from 2012-2015 led to increased agricultural production, higher incomes, significant improvements in water and sanitation, and climate change awareness yet climate resilience at the community level was limited by multiple factors related to a) insufficient funding for national-level policies and plans in adaptation, b) the treatment of farmer and water management as target groups rather than vehicles for broader reach and adaptive planning, and c) climatic conditions that have been favourable for agricultural production over the past two years, which in local eyes rendered adaptive planning as a low priority. CARE International/Water Aid, *Food, water, rain, risk: the uphill struggle to adapt. Final evaluation of the MAKAS project on community-based adaptation in Timor-Leste*, 2015.

but they can assist future projects if gender equity is a clear objective within the project design.

8) Ensure operations and maintenance arrangements

The Government of Timor-Leste has recognized the issue of sustainability with established requirements for user groups. The O&M innovations introduced in water supply/WASH programmes (*WaterAid* programmes) and for rural road projects (R4D – ILO) enhance the potential for sustainability if they are linked to community mobilisation and leadership. O&M aspects need to be given high priority at the design stage as well as in the exit strategy, drawing on the sustainability experiences of other projects and the government policy commitments to ensure sufficient maintenance budgets.

9) Develop collaborative and programmatic approaches to climate resilience

SSRI established working partnerships to facilitate project delivery but larger scale harmonization and synergies need to overcome organisational boundaries between sectors, ministries and development assistance programmes. For a small country like Timor-Leste where climate change adaptation is centered on storm and drought events, land stability hazards and road and water infrastructure vulnerabilities, it should be easier to promote direct, complementary efforts by donors aimed at specific institutional and capacity development needs. The soil bio-engineering working group is a good example on the technical front. But many other opportunities may exist for higher level programmatic collaboration between donors and amongst UN agencies on the institutional capacity and governance issues that affect all climate change adaptation results.

6.0 CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusions

1. The project has achieved important results associated with establishing a profile and protocol for planning climate-resilient infrastructure development and highlighting opportunities for better technical quality of design and construction and use of bio-engineering measures. The broad scope of the project involving four sectors (roads, water supply, irrigation, flood protection) and many areas of activity on policy, climate information, climate risk and vulnerability analysis, national/subnational infrastructure planning and budgeting, capacity development, construction project contracting, and community mobilisation at a time of changes in government and decentralisation uncertainties presented challenges for implementation. The project team has done a good

job managing a broad set of activities including field projects in dispersed and remote locations.

2. The project made a significant contribution to awareness-raising about climate risks to rural infrastructure, development of climate risk planning methods and training staff within government and private sectors on climate resilient infrastructure. Introduction of climate risk priority-setting and design processes for infrastructure investment with higher construction standards along with use of soil bio-engineering measures were key achievements of the project. The project has established an approach that, along with institutional reform and capacity development, can guide future initiatives to strengthen climate-resilient rural infrastructure.
3. The project provided support for policy development, government coordination, climate risk information and analyses, community-based infrastructure planning and human resource skills. An information-sharing platform and a multi-agency coordination mechanism have been established that might support climate resilience in rural infrastructure investments although they still need to be tested. The mainstreaming and adoption of climate resilience attributes in government infrastructure planning and budgeting processes (e.g., PDIM) has commenced through new guidelines, awareness, skills and hands-on experience in three municipalities, eight districts and 30 villages, setting the stage for further development.
4. The project strategy included extensive training of government, local construction companies and NGOs to design and implement climate resilient rural infrastructure, and demonstrating climate resilience in a series of 20 projects under the government's PDIM infrastructure development programme and through community-based project grants to NGOs. The climate resilience elements involved measures to (a) strengthen the quality of construction (in order to better withstand climate extremes) and (b) to use soil bio-engineering and related ecosystem-based micro-watershed management to supplement the infrastructure functions. This approach is highly relevant for Timor-Leste since the design, costing, contracting, construction and supervision processes for rural infrastructure need substantial upgrading as a basis for greater climate resilience.
5. The CCAPRID was a major effort to demonstrate community-based climate-resilient infrastructure analysis and planning in 30 Sucos. The practical, participatory experience of identifying community priorities and proposals for response to climate change was a new approach in Timor-Leste to establishing a local and technically-oriented approach to

building consensus on climate resilience needs and actions. The effect on infrastructure budgets and decisions is expected to be positive but may take time to be fully utilized.

6. The project sponsored many training sessions for hundreds of participants. This included training for local contractors, management training for municipal staff, training on GIS and remote sensing, workshop presentation and international visits. Government staff, local contractors and NGOs are now better capable of addressing climate resilience design and improved construction standards based on the training and field experience.
7. The project exceeded the target of 100,000 beneficiaries but the treatment of 5000 ha of degraded lands was less than expected (exact achievement not reported in PIR 2017). The government PDIM projects and NGO community projects were completed in a generally timely manner with only a few exceptions, but with substantial PIU staff support. High quality construction is apparent in the extra effort at technical assistance and supervision of construction by project staff. Not all of the bio-engineering slope stabilization measures were effective, but some important lessons have been learned about plantation preparation, species selection, survival and maintenance that will build upon the progress to date.
8. The TE interviews indicated government staff familiarity with (a) setting priorities based on climate risk, (b) implementing better construction and maintenance standards and (c) using bio-engineering approaches. The project has laid the foundation and provided demonstration sites but it remains to be seen if the new climate risk assessment, planning guidelines, skills development and demonstration experience will fundamentally change PDIM project design and construction qualities in the short term. Significant and persistent capacity and financial limitations of various levels of government may constrain the extent to which transformation toward high quality, climate-resilient rural infrastructure has taken place, pointing to the need for ongoing support.
9. The project staff and management have diligently facilitated implementation under difficult circumstances – broad scope of the activities, major capacity limits of participants, problematic government contracting systems, government re-organisation, community reluctance to participate, difficult access to land, unfavorable weather conditions, limited water source data, lack of water for plantations, etc. Vagueness in the original project design (see Section 3.1.1), limited cross-ministry coordination (see Section 5.0), and changes in project personnel also imposed some inefficiencies and requirements for proactive management of the project by the PIU and MSA.

10. The addition of climate-proofing measures or modifications to infrastructure designs is a typical strategy for GEF climate change projects, but SSRI is different in that the primary climate change resilience strategy (in addition to introducing soil bioengineering) is basic improvements in the quality of infrastructure design, construction and maintenance. There are many reasons why government authorities lack capacity, only some of which can be resolved through government staff and contractor/NGO training and new guidelines. The UNDP-led design-construct-transfer + train model demonstrates and showcases best practices for climate-resilient infrastructure development but it largely overlooks the fundamental structural institutional constraints in Timor-Leste. The LGSP project was originally expected to strengthen the local planning processes and SSRI was to generate the climate risk and vulnerability assessments, design specifications, procurement and construction. But LGSP II did not proceed and in the face of capacity issues, the SSRI staff and contractors assumed major responsibility for field project design and implementation, hoping that the many training sessions and technical assistance would be sufficient for capacity development and ongoing maintenance and sustainability. The project strategy is vague on how the capacity development activities are expected to embed the demonstrated practices without further institutional reform and organisational development. While significant progress has been made over the baseline conditions, interviewees at the municipalities were unable to explain the overall change in approach to infrastructure design, construction and operation or show us an example of an updated infrastructure plan that included climate-resilient project designs (these may be in process). SSRI was viewed as a separate UNDP project even though it is part of the government PDIM program. We were also unable to find modified suco development plans but the new skills and procedures to prioritize vulnerable infrastructure and to develop better proposals are nevertheless expected to have incremental positive effects in the future on climate-resilient infrastructure.

11. There is still a long path to firmly establish climate-resilient rural infrastructure development within the government systems in Timor-Leste. The project has made a significant contribution toward the awareness, policy, approach, methodology, skills and practical demonstration in three project municipalities. The field demonstration projects provide useful examples of measures that can be applied to strengthen climate resilience if the experiences and lessons can be carried forward in other climate change projects and programmes.

6.2 Recommendations

Recommendation 1: SSRI project should consolidate the best practices from demonstration projects and provide specific advice to the Government of Timor-Leste on potential improvements and resources needed for implementation of the climate resilience provisions of the PDIM Planning Manual based on SSRI project experiences.

Rationale: The project has learned some useful lessons on improving the quality of climate-resilient infrastructure planning, design, construction and maintenance. These now need to be translated into a concise set of messages and advice to government on incremental changes that can be introduced within the existing PDIM/PDNS investment processes to enhance climate resilience. The long-term benefits and cost effectiveness of good design, construction, maintenance and use of bio-engineering should be highlighted. The project advice could, for example, be aimed at further refinements to the PDIM Planning Manual (specific steps for design, contracting, and construction of climate-resilient infrastructure including appropriate bio-engineering methods) and potential development of a Quality Assurance Checklist for developing and maintaining the climate-resilient rural infrastructure projects.³⁸ Advice on the institutional structure and support needed for applying the planning guidelines, in context with government decentralisation initiatives, would also be useful.

Recommendation 2: SSRI project should prepare a detailed capacity development plan to scale-up of climate resilience measures to other municipalities, including organisational structure and capacity to oversee such measures, drawing upon an assessment of the current status of PDIM infrastructure development processes in the SSRI project municipalities.

Rationale: The project has provided significant training and technical assistance to municipalities, Administrative Posts and Sucos in pilot areas of Ermera, Baucau and Liquica Municipalities. The climate-resilience aspects of the SSRI project are outlined in Table 2. A follow-up survey and assessment of the current capacity to plan, contract, construct and manage climate-resilient infrastructure in the project municipalities and a capacity development scale-up plan for expanding the program based on lessons and gaps would serve to:

³⁸ Suggestions were made in the 2016 APR/PIR Report for a detailed guideline/checklist on climate resilience within the PDIM Manual and Standard Operating Procedures for use and maintenance.

- a) provide a profile of the key construction design processes and guidance on the use of soil bio-engineering methods to enhance performance in the current PDIM development processes, drawing on experiences to date;
- b) identify any gaps in climate change adaptation capacity for rural infrastructure improvement that need to be addressed as part of the ongoing local government strengthening and decentralisation processes and related follow-up projects;
- c) determine the potential for a Rural Infrastructure Management Unit within MSA with responsibility to support and monitor implementation of the PDIM Planning Guidelines and the quality of PDIM and PNDS-funded infrastructure, and to serve as government liaison to the Soil Bioengineering Working Group;
- d) provide recommendations on feasible organisational and human resources development within local governance structures that could facilitate progress toward climate-resilient infrastructure; and
- e) provide advice on the capacity needed to estimate incremental costs for local government to adapt to climate change and to meet infrastructure climate-proofing standards, which would also enhance readiness to access international climate financing.

Recommendation 3: SSRI project should undertake a status assessment of the GMF user groups for water supply and distribution facilities at the project sites and provide recommendations to the municipalities on the capacity of these groups to maintain the facilities.

Rationale: Sustaining the investments in water supply systems is an important aspect of project closure. The government policy requires GMF groups to be established. While this may have occurred on paper, the functional operation of these groups is not assured. The TE found that few of them had yet to establish operational procedures and fee collection. Drawing upon the experience and methods of *Water Aid*, it may be possible to provide further advice to the project Municipalities, APs and Sucos on further action needed by communities to ensure sustainability of operations and maintenance at the project sites.

Recommendation 4: UNDP and ILO should prepare a joint summary of the key issues and lessons related to their common experiences with construction contracts for rural roads in Timor-Leste for the attention of the Minister of State for Administration and the Minister of Public Works.

Rationale: The institutional, capacity and procedural administrative constraints affecting the construction and rehabilitation of rural infrastructure impose a large burden for implementing agencies. The effective and efficient delivery of results for rural communities is adversely

affected by lack of capacity, bureaucratic hurdles, inexperienced contractors, organizational uncertainty on decentralisation, low development and maintenance standards and political influences particular to Timor-Leste. The project experiences with these specific bottlenecks and capacity issues and the potential remedies that government could consider to reduce their effects would be a useful 'One UN' contribution. A concise set of observations from road rehabilitation project experiences can assist this policy discussion in the evolving government decentralisation process.

Recommendation 5: UNDP should apply the design and operational lessons learned from the SSRI project to the forthcoming Green Climate Fund project.

Rationale: Important lessons have been learned from the project related to communications, coordination, institutional change processes, community liaison and consultation, capacity assessment and development that goes beyond training, project supervision requirements, administrative timelines and other matters. The institutional development challenges and possible options need to be highlighted for future projects. UNDP is involved in similar projects and proposals that could benefit from the SSRI experiences. A targeted effort to address the SSRI lessons learned and implications for the proposed GCF project would assist in program learning and future project implementation planning, taking into account the particular challenges of limited local capacity and issues of working with government systems in Timor-Leste.

Annexes

Annex 1: Terms of Reference

Annex 2: Evaluation Criteria

Annex 3: Interview Guide

Annex 4: Itinerary and Interviews

Annex 5: List of Documents Reviewed

Annex 6: List of Contacts

Annex 7: Summary of SSRI Project Achievements

Annex 8: Summary of SSRI Field Projects

Annex 9: Evaluation Consultant Form

Annex 10: Evaluation Report Clearance Form

Annex 1: Terms of Reference

A. Project Title:

Strengthening the Resilience of Small Scale Rural Infrastructure (SSRI) Project and Local Government Systems to Climate Variability and Risk.

B. Project Description:

The GoTL requested UNDP to assist in formulation and implementation of projects to implement NAPA priorities, in its capacity as Implementing Agency accredited to the Global Environment Facility (GEF) that administers the Least Developed Country Fund (LDCF). UNDP is supporting the Government of Timor-Leste in the implementation of two National Adaptation Programme of Actions (NAPA) follow-up projects under the least developed country fund (LDCF) administered by the Global Environment Facility (GEF). Through these projects, the government aims to strengthen the capacity of local administration to address climate and disaster risks mainly flood, erosion and landslides through a) introduction of climate resilient small scale rural infrastructures (SSRI Project) and b) community based watershed approach to disaster risk management along the Dili to Ainaro Road Development Corridor (DARDC Project).

The Full-Scale Project “*Strengthening the Resilience of Small Scale Rural Infrastructure and Local Government Systems to Climatic Variability and Risk*” is being implemented between the period of November 2013 and December 2017 to support the Ministry of State Administration (MSA) and Ministry of Commerce, Industry and Environment (MCIE) to implement climate resilient rural infrastructure projects in the three focus Municipalities of Baucau, Ermera and Liquica.

The project was designed to support the Ministry of State Administration (MSA) and Ministry of Commerce, Industry and Environment (MCIE) to implement NAPA priorities and work closely with government and local authorities in the development and implementation of climate resilient rural infrastructure projects in three focused municipalities (Baucau, Ermera and Liquica). The Government of Timor-Leste requested UNDP to assist in formulation and implementation of this project to implement NAPA priorities, in its capacity as Implementing Agency accredited to the Global Environment Facility (GEF) that administers the Least Developed Country Fund (LDCF).

The objective of the project is critical small scale rural infrastructure is climate resilient designed and implemented through participatory approaches and strengthened local governance systems, reflecting the needs of communities vulnerable to increasing climate risks. The overall goal of the project is to safeguard development benefits for rural communities from future climate change induced risks. This goal is consistent with and underpinned by, number of important policies and strategies governing Timor-Leste’s national development and its specific respond to climate change.

The LDCF funds for this project are being used by the Government of Timor-Leste to address these barriers through 3 components.

1. Component 1 to support the capture and dissemination of evidence on local climate risks and vulnerabilities for national policy influencing, the development of an overarching climate change policy framework and the establishment of a multi-stakeholder knowledge exchange platform.
2. Component 2 to support the development of climate variability risk and vulnerability assessment tools and the integration of climate risks in local planning, budgeting, infrastructure design, construction and maintenance. This will be accompanied by substantial capacity development measures to strengthen the capacity of Local Administrations and service providers on climate resilient local planning/budgeting processes and infrastructure engineering and implementation.
3. Component 3 is to provide incentives for implementation of climate resilient local plans via investment grants for climate resilient small-scale infrastructure and ecosystem services, which will directly benefit over 100,000 people.

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 title (PIMS # 4817). Therefore, UNDP is seeking a qualified National consultant to provide support to the Team Leader of the evaluation mission to undertake the terminal evaluation of the project and all activities undertaken between 2013 – 2017 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 Project Manager/CTA and in consultation of UNDP Sustainable Development and Resilience Unit and other projects staff, 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 mission to Baucau and Ermera Municipal Authorities and Liquica Municipality, including the selected project sites. Interviews will be held with the following organizations and individuals at a minimum:

- Ministry of Commerce, Industry and Environment (MCIE)
- Ministry of State Administration (MSA)
- Ministry of Public Works, Transport and Communication (MPWTC)
- Director General for Environment and GEF Focal Point, MCIE
- Director General for Urban Management, MSA
- National Director for Climate Change, MCIE
- National Director for Toponymy, MSA
- National Director for Pollution Control and EIA
- Director, Centre for Climate Change and Biodiversity (CCCB)
- President of Municipal Authorities of Baucau and Ermera
- Administrator of Liquica Municipality
- Chief of Villages in Baucau and Ermera Municipal Authorities and Liquica Municipality
- 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.

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 main phases of the terminal evaluation are as follows:

a. 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.

b. Inception Phase

- Draft and submit 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.

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

- Field mission in Timor-Leste, facilitate meetings and conduct interviews with stakeholders in Dili, Baucau and Ermera Municipal Authorities and Liquica Municipality, and site visit to selected sites in the three focus districts and
- 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.

d. 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.

e. 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.

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.

F. 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 directly to the Project Manager for the SSRI project. UNDP project team will facilitate administrative arrangements and logistical support including coordinating and facilitating the in-country mission and field visits with support of the national evaluator/consultant. The evaluation mission consultants will be provided office space in the SSRI 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 as team leader 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).

G. 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.

Annex 2: Evaluation Criteria

Criteria	Evaluation Questions	Indicators	Data Sources
Relevance <i>The acceptance, suitability and practicality of the project concept and implementation strategy and the extent of alignment with national climate change policies frameworks, local needs and UNDP country programming.</i>	<p>To what extent were project activities suited to local and national development priorities and organizational policies?</p> <p>Is the project concept and approach still accepted as relevant and achievable by project stakeholders and in-line with country priorities?</p> <p>To what extent is the project integrated with country/partner institutions and programmes?</p> <p>Was the Project Strategy the most effective route towards planned results?</p> <p>To what extent do the underlying assumptions remain valid?</p>	<p>Stakeholder views of the project concept and approach</p> <p>Changes in provincial or partner priorities that affect relevance of the project</p> <p>Extent of partners involvement and ownership including integration into ongoing programmes</p> <p>Evidence of validity of key assumptions associated with project results</p>	<p>Review of alignment with government programmes and institutions</p> <p>Interview data on beneficiaries perceptions of the project</p> <p>Interview data with staff, ADB and other donors on the quality of the project design</p>
Effectiveness <i>The achievement and timeliness of the targeted outcomes and outputs per the Project Document and Annual Workplans, including cross-cutting results related to development, gender and environmental sustainability.</i>	<p>What quantitative and qualitative achievements have occurred in terms of output/outcome targets?</p> <p>To what extent have the vulnerability assessment methods been integrated into provincial development systems?</p> <p>Were the component 3 demonstration methods successful and what factors affected success or failure?</p> <p>What effects on beneficiaries' climate change resilience can be observed?</p> <p>What contributions to cross cutting gender and environmental sustainability objectives can be observed?</p> <p>What specific gaps, if any, remain to be addressed in Outcomes 1, 2 and 3?</p>	<p>Reported progress per the Project Document Indicators</p> <p>Completion of Vulnerability Risk Assessment before and after project activities</p> <p>Changes in provincial infrastructure investment practices</p> <p>Capacity scorecard ratings</p> <p>Community and govt perceptions of infrastructure improvements effectiveness</p> <p>Disaggregated gender data on project activities and beneficiaries</p> <p>Changes in perceived environmental risks in the targeted communes</p>	<p>Assessment of progress by project staff and beneficiaries</p> <p>Compilation of data on reported results of project interventions including PIRs</p> <p>Review of pre and post project results surveys and assessments</p> <p>Field observation on quality of measures installed and operating</p>
Efficiency <i>The clarity and effectiveness of work planning and implementation duties and reporting relationships, coordination and communication between implementing organisations and levels, project management</i>	<p>Implementing arrangements: How effective are the working relationships and coordination and communication between partners and contractors?</p> <p>Work planning: Is the annual work plan preparation participatory and consistent with the project document and results framework?</p> <p>Finance/cofinancing: Has project financing and budgeting occurred as planned?</p> <p>Project efficiency/cost effectiveness: Has the project been generally</p>	<p>Understanding of roles/responsibilities</p> <p>Participant satisfaction</p> <p>Stakeholder participation in AWP preparation</p> <p>AWP implementation extent aligned with Project Document</p> <p>Annual expenditures in relation to annual budgets</p> <p>Co-financing and in kind contributions provided</p> <p>Efficiency of disbursements and financial management</p>	<p>Analysis of implementation modalities</p> <p>Assessment of AWP and process</p> <p>Review of expenditures and co-financing contributions and financial and audit reports</p>

<p><i>structure effectiveness and responsiveness ('adaptive management'), efficiency of the administration and quality/timeliness of the monitoring and reporting systems.</i></p>	<p>efficient and cost effective in relation to results? Project management: Have the project management bodies and partners been effectively engaged in guiding the project and adapting to project implementation issues? Monitoring and reporting: The reliability and usability of the project indicators for monitoring and reporting against baseline conditions, the quality of the monitoring plan/reports, and the effectiveness of the monitoring system and data quality.</p>	<p>Outputs achieved relative to costs; value for money Proportion of costs for project management Number of meetings and decisions taken by project committees Perceived clarity of roles and responsibilities Pro-active actions of project management bodies Use of project indicators in progress reports Monitoring of cross-cutting issues in progress reports</p>	<p>Assess reasons for delays Analysis of project events and milestones and working relationships between stakeholders</p>
<p>Sustainability <i>The conditions necessary for project-related benefits and results being sustained after the project is completed and any risks affecting project implementation and replication potential.</i></p>	<p>Sustainability planning: To what extent does the project explicitly consider sustainability expectations and a project exit strategy? Institutional sustainability: What institutional capacity development measures will enhance sustainability? Policy sustainability: What policy development measures will enhance sustainability? Financial sustainability: What financial commitment or business case developments will enhance sustainability? Risk identification: Have the critical risks been sufficiently addressed? Replication potential: Are the necessary conditions in place to support adoption of project technologies and measures by other communities?</p>	<p>Sustainability strategies in the project design and delivery Extent of capacity development within targeted organisations Changes in policy to sustain project results Financial means to sustain and replicate project results Validity and importance of the risks identified in the Project Document/ ATLAS Risk Management Module Observed nearby replication activities that support sustainability</p>	<p>Assessment of institutional capacity development and stakeholder commitment Sustainability analysis from interview data Risk analysis using Project Document and ATLAS</p>
<p>Impact <i>The effects of the project on long term resilience to climate change impacts and stress, and the capacity of government and local communities to respond to drought, flooding and water scarcity.</i></p>	<p>Are there indications that the project has contributed to, or enabled progress toward reduced vulnerability and enhanced climate change resilience? Has overall capacity to withstand extreme weather events increased? Will the capacity development and mainstreaming of climate resilience standards have a long term effect on infrastructure investment discussions in the provinces?</p>	<p>Reduction of vulnerability to climate variability and climate change Verifiable changes in infrastructure design standards Increased institutional capacity to address climate change</p>	<p>Interviews with project stakeholders Surveys on community vulnerability status</p>

Annex 3: Interview Guide

This is a general guide only to be used in context with the evaluation issues and criteria above. It is not a questionnaire. It serves as an informal aid in prompting discussion during the interviews.

Part I – reference questions: project staff, partners and stakeholders

Project Formulation

1. How has the project design concept been adequate to assist implementation?
2. Has the joint UNDP-GEF-ADB approach been effective?
3. Were there any project risks that were not identified or adequately considered, and how could they have been better anticipated and managed?
4. If the project was to be implemented again, are there any changes in project design and results framework that you would suggest?
5. What have been the major challenges or issues in implementing the project? Are there lessons for design of future projects (e.g., GCF)?

Project Implementation

6. How effective and efficient was the Project Structure and Organization in facilitating project coordination, communications and implementation? Would you have changed anything in hindsight?
7. Has annual work planning and budgeting been effective, and have disbursements been in line with annual budgets? Were there any delays in administrative processes?
8. Have the project monitoring indicators been effective and feasible for reporting on progress? If not, why not? Has the Capacity Scorecard been used as planned?
9. How well coordinated were the UNDP and ADB knowledge development and communication plans?

Project Results

10. What aspects of the project have been most successful, and which least successful? Which measures have proven potential for replication?
11. Overall, what are the most important or significant achievements of this project?
12. Are there specific changes in institutional capacity at provincial, district or commune level that could be attributed to the project? How has the project changed these institutions?
13. Were there any expected results have not been completely achieved or are not fully satisfactory? What critical gaps could be considered in project extension?
14. What follow-up assessment of training program results has been undertaken? What gaps remain in capacity development?
15. What are the key lessons from the demonstration sites?

Sustainability

16. How likely is it that the main outcome level results – improved capacity, demonstrated measures, can be sustained? What will be the effects of project closure on these results?
17. How will local authorities ensure maintenance of the infrastructure investments? What is the likelihood of responsible maintenance?
18. What project exit strategies, if any, have been or could be considered to enhance sustainability?

Impact

19. How significant has climate change vulnerability reduction action been at subnational level – minor, substantial, transformative? What are the key factors that affect long term impact?

Part II – Field level questions: beneficiaries, local government, contractors

Project Formulation

1. Has the project been designed in an effective manner? Would you change anything in future designs of these types of projects?
2. To what extent were you involved in the project formulation?

Project Implementation

3. What specific factors or conditions have particularly helped or hindered progress in project implementation? Have there been any implementation problems?
5. Did you receive any training from the project? If so, how useful was it? Are you using anything specific from the training?
6. What has the experience been in working with contractors to complete the work to accepted standards and on time?
7. How well were your views taken into account by the project staff and managers? Is there anything you would have liked to have seen done differently?

Project Results and Sustainability

8. How significant has the project been in reducing climate change risks in the targeted infrastructure? Will the improved capacity and methods adequately address flooding or drought problems?
9. Can you explain the key factors that have contributed toward the project results – either positive or negative?
10. To what extent have construction standards and practices changed as a result of this project? Can you give a specific example?
11. What is the most important learning or skill, if any, that you have acquired from the project?

12. Do you think that the project activities will be continued after the project closes? Why? Why not?

Impact

13. What gaps or challenges remain for improving the climate change resilience of the rural infrastructure? Are there implications for follow-up or project extension?

14. Should any changes in government policy be considered to assist the expansion of a climate-proofing approach to infrastructure investment?

Note: these are questions for general reference and guidance only. They may be modified as needed and others may be added.

Annex 4: Itinerary and Interviews

Activity	Persons	Organisation	Location	Time
UNDP Country Team and SSRI team (Kick off meeting)	SSRI team / PIU	UNDP CO	Finns Room	23rd Oct 2.30 pm
Director General for Urban Management, MSA and Dir National of Toponomy	Miguel Pereira Carvalho,DGOU, Herminio Moniz, National Director (DNTOP)	MSA	DGOU	24th Oct 9.00-10.00
Meeting with UNDP Country Director	Claudio Providas	UNDP	Brief phone call	Oct 24, 10.30
GIZ (German Society for International Cooperation)	Mirko Gamez			Oct 24. 2.00-2.30.00
National Director for Pollution Control and EIA	Amenica, Directris	Environment	Fomento	Oct 24 : 3:00-3.30
Director General for Environment and GEF Focal Point, Environment and Dir of Climate Change	Joao Carlos, DG, Augusto Pinto, National Director	DG for Environment and National Director, MCIE	Fomento	Oct 24 : 3.30-400pm
CARE International	Peter Raynes, Country Director	CARE	Care Office Bairopite	oct 25 8.00-8.30
Water Aid Country Team	Alex Grumbley	Water Aid Country Director	Water Aid office, Bairro dos Grilos	25 Oct 10-10.30
Director, Centre for Climate Change and Biodiversity (CCCB)	Adao Barbosa	CCCB		NOT AVAILABLE
World Bank	Eric Vitale		WB Office	Oct 25, 2017
UN Women	Sunita Caminha,	UN Women Office, UN Compound	UN Women Office	Nov 3: 9-10.00
International Labour Organization (ILO)	Simon Done and Un Yat	R4D Raikotu	R4D Raikotu	Nov, 3 : 10.30-11.00
Soil Bio-engineering Working Group	David Green, ADB consultant Simon Done ILO	UNDP, ADB, R4D		Nov 5, 2017

Debriefing/presentation of initial findings/ recommendations	debriefing / presentation	UNDP and counterparts	Finns Room	November 6, 2017
Director General for Urban Management and National Project Director	Miguel Carvalho Pereira,DG	MSA		Nov. 6, 2017

Schedule for visit to Liquica and Ermera municipalities on 26-27 October 2017 (Liquica Municipality – 26 October, Ermera Municipal Authority – 27 October)

Horas	Aktividades	Participantes/contact persons/institutions
Oct 26 07:30 – 08:00 hrs	Travel from Dili to Liquica	<ul style="list-style-type: none"> Sr Alan Ferguson, consultant international for terminal Evaluation of SSRI project terminal evaluation of SSRI project Reinaldo Soares da Costa, Project Engineer Nelson Pereira Vicente, project Engineer Agostinho Caet, National consultant for terminal evaluation of SSRI project
08:00 – 09:20 hrs	Viagem husi Dili ba Motaulun, Liquica no hasoru malu ho comunidade Liquica <i>Arrival in Motaulun, Liquica and Meeting with community</i>	<ul style="list-style-type: none"> Sr Alan Ferguson, consultant international for terminal Evaluation of SSRI project Chefe suku motaulun Chefe aldeia claso Direktur NGO netil ho comunidade sira Agostinho Caet, National consultant for terminal evaluation of SSRI project
09:30- 10:15 hrs	Hasoru malu ho administrador municipio de Liquica <i>Meeting with municipality administrator of Liquica</i>	<ul style="list-style-type: none"> Sr Alan Ferguson, consultant international for terminal Evaluation of SSRI project Administrador municipio de Liquica Reinaldo Soares da Costa, Project Engineer Nelson Pereira Vicente, project Engineer Agostinho Caet, National consultant for terminal evaluation of SSRI project
09:35 – 09:50	Hasoru malu ho DDO no PDIM Engineers <i>Meeting with DDO and PDIM Engineers</i>	<ul style="list-style-type: none"> Sr Alan Ferguson, consultant international for terminal Evaluation of SSRI project DDO and PDIM Engineers Reinaldo Soares da Costa, Project Engineer Nelson Pereira Vicente, project Engineer Agostinho Caet, National consultant for terminal evaluation of SSRI project
10:20 – 10: 45 hrs	Hasoru malu ho Directur SAS municipio de Liquica <i>Meeting with Director of SAS (Water & Sanitation) - Liquica municipality</i>	<ul style="list-style-type: none"> Sr Alan Ferguson, consultant international for terminal Evaluation of SSRI project Directur SAS municipio de Liquica Reinaldo Soares da Costa, Project Engineer Nelson Pereira Vicente, engenheiro SSRI Agostinho Caet, National consultant for terminal evaluation of SSRI project
10:45 – 11:30 hrs	Travel from Liquica to Lisadilla (Lunch in Loes)	<ul style="list-style-type: none"> Sr Alan Ferguson, consultant international for terminal Evaluation of SSRI project DDO and PDIM Engineers Reinaldo Soares da Costa, Project Engineer

		<ul style="list-style-type: none"> Nelson Pereira Vicente, project Engineer Agostinho Caet, National consultant for terminal evaluation of SSRI project
12:15-13:20 hrs	<p>Visita projeto bronjong iha suku Lisadila no hasoru malu ho comunidade no autoridade suku Lisadila ninia</p> <p><i>Visit to river embankment in Lisadila and meet with community and local authority in that area</i></p>	<ul style="list-style-type: none"> Sr Alan Ferguson, consultant international for terminal Evaluation of SSRI project Chefe suku Lisadila Komunidade beneficiario Reinaldo Soares da Costa, Project Engineer Nelson Pereira Vicente, project Engineer Agostinho Caet, National consultant for terminal evaluation of SSRI project
14:20-15:40 hrs	<p>Visita projeto rehabilitasaun Estrada iha suku Maubaralisa no hasoru malu ho comunidade no autoridade suku Maubaralisa ninia</p> <p><i>Visit to road rehabilitation project in Maubaralisa and meet with community and local authority in that area</i></p>	<ul style="list-style-type: none"> Sr Alan Ferguson, consultant international for terminal Evaluation of SSRI project Chefe suku Maubaralisa Komunidade beneficiario Reinaldo Soares da Costa, Project Engineer Nelson Pereira Vicente, project Engineer Agostinho Caet, National consultant for terminal evaluation of SSRI project
16:00-16:50 hrs	<p>Visita projeto Soil Bio-enginaria iha suku Lukulai no hasoru malu ho comunidade no autoridade suku Lukulai ninia</p> <p><i>Visit to soil bio-engineering activities in Lukulai and meet with community and local authority in that area</i></p>	<ul style="list-style-type: none"> Sr Alan Ferguson, consultant international for terminal Evaluation of SSRI project Chefe suku Lukulai Komunidade beneficiario Reinaldo Soares da Costa, Project Engineer Nelson Pereira Vicente, project Engineer Agostinho Caet, National consultant for terminal evaluation of SSRI project
17:00-18:00 hrs	<p>Viagem husi Liquica ba Ermera</p> <p><i>Travel from Liquica to Ermera</i></p>	<ul style="list-style-type: none"> Sr Alan Ferguson, consultant international for terminal Evaluation of SSRI project Chefe suku Lukulai Komunidade beneficiario Reinaldo Soares da Costa, Project Engineer Nelson Pereira Vicente, project Engineer Agostinho Caet, National consultant for terminal evaluation of SSRI project
OVERNIGHT IN GLENO, MUNICIPAL AUTHORITY ERMERA		
<i>Schedule for the activities of Mr. Alan Ferguson in Ermera Municipal Authority on Thursday 26 October 2017</i>		
07:30 – 08:15 hrs	Breakfast	<ul style="list-style-type: none"> Mr. Alan, Consultant International Mr. Agustinho Caet, Consultant National Nelson Vicente, Engineiru SSRI Reinaldo da Costa, Engineiru SSRI
08:15 – 08:25 hrs	Travel from Hotel in Gleno to Municipal Administration Office	<ul style="list-style-type: none"> Mr. Alan, Consultant International Mr. Agustinho Caet, Consultant National Nelson Vicente, Engineiru SSRI Reinaldo da Costa, Engineiru SSRI

Schedule for Terminal Evaluation in Baucau Municipality on October 29 – 31, 2017

Data/Date	Discriaun/Description	Oras/Hours	Partesipantes/Participants
Domingu 29 – 10 – 2017 <i>Sunday 29 /10/2017</i>	Viagem husi Dili ba Baucau <i>Departure from Dili to Baucau</i>	13:00 – 17:30	<ul style="list-style-type: none"> - Mr. Alan, Consultant International - Devindranauth Bissoon, Project manager/CTA SSRI - Mr. Agostinho Caet, Consultant Nacional - Nelson Vicente, Engineiru SSRI - SSRI Driver
Segunda 30 – 10 – 2017 <i>Monday 30/10/2017</i>	Overnight in Baucau Municipality		
	Breakfast and travel to Municipal Administration Office	07:25 – 08:00	<ul style="list-style-type: none"> - Mr. Alan, Consultant International - Devindranauth Bissoon, Project manager/CTA SSRI - Mr. Agostinho Caet, Consultant Nacional - Nelson Vicente, Engineiru SSRI - Drivers
	Enkontro ho Presidente Autoridade no chefe PDIM <i>Meeting with President of Authority and chief of PDIM in Municipality office</i>	08:00 – 09:30	<ul style="list-style-type: none"> - Presidente Autoridade de Baucau - Mr. Alan, Consultant International - Devindranauth Bissoon, Project manager/CTA SSRI - Mr. Agostinho Caet, Consultant Nacional - Nelson Vicente, Engineiru SSRI
	Enkontro ho DDO no EVAS team <i>Meeting with Chief of PDIM and EVAS Team</i>	09:35 – 09:50	<ul style="list-style-type: none"> - Chief of PDIM of Baucau Municipality - EVAS Team - Mr. Alan, Consultant International - Devindranauth Bissoon, Project manager/CTA SSRI - Mr. Agostinho Caet, Consultant Nacional - Nelson Vicente, Engineiru SSRI
	Enkontro ho Director SAS Municipiu Baucau <i>Meeting with Director of SAS in SAS Office</i>	09:55 – 10:25	<ul style="list-style-type: none"> - Director SAS Municipio de Baucau - Mr. Alan, Consultant International - Devindranauth Bissoon, Project manager/CTA SSRI - Mr. Agostinho Caet, Consultant Nacional - Nelson Vicente, Engineiru SSRI

Enkontru ho Director Agricultura <i>Meeting with Director of Agriculture in Agriculture Office</i>	10:30 – 10:55	<ul style="list-style-type: none"> - Director Agricultura - Mr. Alan, Consultant International - Devindranauth Bissoon, Project manager/CTA SSRI - Mr. Agostinho Caet, Consultant Nacional - Nelson Vicente, Engeneiru SSRI - SSRI Driver
Visita to projeto PDIM <i>Visit to PDIM Project</i>	10:55 – 11:35	<ul style="list-style-type: none"> - Mr. Alan, Consultant International - Devindranauth Bissoon, Project manager/CTA SSRI - Mr. Agostinho Caet, Consultant Nacional - Nelson Vicente, Engeneiru SSRI - SSRI Driver
Departure from PDIM project to Baucau	11:35 – 11:50	<ul style="list-style-type: none"> - Mr. Alan, Consultant International - Devindranauth Bissoon, Project manager/CTA SSRI - Mr. Agostinho Caet, Consultant Nacional - Nelson Vicente, Engeneiru SSRI - SSRI Driver
Lunch Time in Baucau	11:50 – 13:00	<ul style="list-style-type: none"> - Mr. Alan, Consultant International - Devindranauth Bissoon, Project manager/CTA SSRI - Mr. Agostinho Caet, Consultant Nacional - Nelson Vicente, Engeneiru SSRI - SSRI Driver
Viagem husi Baucau ba projeto Irigasaun iha suco Lacoliu <i>Departure from Baucau to Irrigation Project in suco Lacoliu</i>	13:00 – 14:30	<ul style="list-style-type: none"> - Mr. Alan, Consultant International - Devindranauth Bissoon, Project manager/CTA SSRI - Mr. Agostinho Caet, Consultant Nacional - Nelson Vicente, Engeneiru SSRI - SSRI Dirver
Enkontro ho Chefe suco Lacoliu no beneficiario no visita projeto irrigasaun. And visit to PDIM Project <i>Meeting with Chefe Suco Lacoliu, meeting with beneficiary in project site and visit to irrigation project and</i>	14:30 – 15:30	<ul style="list-style-type: none"> - Chefe Suco Lacoliu - Mr. Alan, Consultant International - Devindranauth Bissoon, Project manager/CTA SSRI - Mr. Agostinho Caet, Consultant Nacional - Nelson Vicente, Engeneiru SSRI - Engeneiro Agricultura

	<i>also visit to PDIM project (water supply)</i>		
	Viagem husi suco Lacoliu ba Baucau <i>Departure from suco Lacoliu to Baucau</i>	15:30 – 17:00	<ul style="list-style-type: none"> - Mr. Alan, Consultant International - Devindranauth Bissoon, Project manager/CTA SSRI - Mr. Agostinho Caet, Consultant Nacional - Nelson Vicente, Engieiru SSRI - Engieiro Agricultura - SSRI Driver
Overnight in Baucau Municipality			
Tersa 31 – 10 – 2017 <i>Tuesday 31/10/2017</i>	Breakfast	07:30 – 08:00	<ul style="list-style-type: none"> - Mr. Alan, Consultant International - Devindranauth Bissoon, Project manager/CTA SSRI - Mr. Agostinho Caet, Consultant Nacional - Nelson Vicente, Engieiru SSRI - SSRI Driver
	Viagem husi Baucau ba Buruma <i>Departure from Baucau to road project in suco Buruma</i>	08:00 – 08:15	<ul style="list-style-type: none"> - Mr. Alan, Consultant International - Devindranauth Bissoon, Project manager/CTA SSRI - Mr. Agostinho Caet, Consultant Nacional - Nelson Vicente, Engieiru SSRI - SSRI Driver
	Enkontro ho Chefe Suco buruma, beneficiario no visita projeto estrada <i>Meeting with Chefe suco Buruma, meeting with beneficiary in project site and visit to irrigation project.</i>	08:15 – 09:45	<ul style="list-style-type: none"> - Chefe Suco Buruma - Mr. Alan, Consultant International - Devindranauth Bissoon, Project manager/CTA SSRI - Mr. Agostinho Caet, Consultant Nacional - Nelson Vicente, Engieiru SSRI

Viagem husi Buruma ba Uailili <i>Departure from Buruma to Uailili</i>	09:45 – 10:15	<ul style="list-style-type: none"> - Mr. Alan, Consultant International - Devindranauth Bissoon, Project manager/CTA SSRI - Mr. Agostinho Caet, Consultant Nacional - Nelson Vicente, Engeneiru SSRI
Enkontro ho Chefe Suco Uailili, beneficiario no visita projeto irrigasaun <i>Meeting with Chefe suco Uailili, meeting with beneficiary in project site and visit to irrigation project</i>	10:15 – 11:00	<ul style="list-style-type: none"> - Chefe suco Uailili - Mr. Alan, Consultant International - Devindranauth Bissoon, Project manager/CTA SSRI - Mr. Agostinho Caet, Consultant Nacional - Nelson Vicente, Engeneiru SSRI
Viagem husi Uailili ba Baucau <i>Departure from Uailili to Baucau</i>	11:00 – 11:20	<ul style="list-style-type: none"> - Mr. Alan, Consultant International - Devindranauth Bissoon, Project manager/CTA SSRI - Mr. Agostinho Caet, Consultant Nacional - Nelson Vicente, Engeneiru SSRI - SSRI Driver
Lunch Time	11:20 – 12:30	<ul style="list-style-type: none"> - Mr. Alan, Consultant International - Devindranauth Bissoon, Project manager/CTA SSRI - Mr. Agostinho Caet, Consultant Nacional - Nelson Vicente, Engeneiru SSRI - SSRI Driver
Viagem husi Bucau ba Vemasse <i>Departure from Baucau to Vemasse</i>	12:30 – 13:30	<ul style="list-style-type: none"> - Mr. Alan, Consultant International - Devindranauth Bissoon, Project manager/CTA SSRI - Mr. Agostinho Caet, Consultant Nacional - Nelson Vicente, Engeneiru SSRI - SSRI Driver
Visita Actividade CCAPRID <i>Visit to CCPRID Activity</i>	13:30 – 14:00	<ul style="list-style-type: none"> - Mr. Alan, Consultant International - Devindranauth Bissoon, Project manager/CTA SSRI - Mr. Agostinho Caet, Consultant Nacional - Nelson Vicente, Engeneiru SSRI -

	<p>Viagem husi Vemasse ba Dili</p> <p><i>Departure from Vemasse to DILI</i></p>	14:00 – 17:30	<ul style="list-style-type: none"> - Mr. Alan, Consultant International - Devindranauth Bissoon, Project manager/CTA SSRI - Mr. Agostinho Caet, Consultant Nacional - Nelson Vicente, Engeneiru SSRI - SSRI Driver
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Annex 5: List of Documents Reviewed

Margaretta Ayong and Sergio Barreto, *Mid-term Review – Final Report*, May 2016

Karabi Baruah, *Gender Action Plan -Mainstreaming Gender in Small Scale Rural Infrastructure (SSRI) Project*, Jan. 2017

Karabi Baruah, *Roadmap on engendering PDIM process with special focus on climate resilient small scale rural infrastructure*, April 2017

CARE International/Water Aid, *Food, water, rain, risk: the uphill struggle to adapt. Final evaluation of the MAKAS project on community-based adaptation in Timor-Leste*, 2015.

SSRI Project, Project Annual Review Report, 12 December, 2016

Government of Timor-Leste, GRM International, *Integrated District Development Planning Guide for the Elaboration of District Investment Plans*, 2012

Harold Lockwood, Alex Grumbley, and Vincent Casey, *Supporting sustainable water supply services in difficult operating environments: a case study from Timor-Leste*, Water Aid, n.d

International Labour Organisation, *Final Progress Report of the Roads for Development Program*, 2017

Munez, P., Training Report, Basic Training course on G.I.S., Basic Training Course on GIS, 2017 (29 attending)

SSRI Project, Field Report of Ermera and Liquica, 06-10 October 2014.

SSRI Project, Baucau field trip report; 20 participants attended the discussion coming from SAS, Environment, Public Works, CDOs from the sub-district of Baucau, Vemasse and Quelicai, DDO, PDID technical staff included 4 students.

SSRI Project, Training to NGOs Report, training session for the NGOs reporting (technical and financial reports) and use of GPS and NGO progress report, May 4, 2016.

SSRI Project, Workshop presentation report of NGOs activities progress, June 26, 2017.

SSRI Project, *Strengthening the Resilience of Small Scale Rural Infrastructure (SSRI) Project and Local Government Systems to Climate Variability and Risk Project Document*, Government of Timor-Leste/ GEF/ UNDP, 2013.

SSRI Project Fact Sheet: *Strengthening the Resilience of Small Scale Rural Infrastructure (SSRI) and Local Government Systems to Climatic Variability and Risks Project 00087262*.

SSRI Project input to PDID Planning Manual Revision –Revision areas in Planning Steps, Nov. 2, 2014.

SSRI Project, *Assessment on Climate Change Adaptation Planning for Rural Infrastructure Development in Three Selected Municipality, Baucau, Ermera and Liquica in Timor-Leste*.

SSRI Project, *Engaging local NGOs and CBOs in championing innovative solutions for improving the stability and climate resilient of watersheds through bio-engineering intervention*, Final Report, 2017.

SSRI Tracking Tool for CCA Projects, 15-09-2017.

Tavares M, Gomes M, Fernandes R and Gusmão M (2014) Timor-Leste's Initial National Communication.

The World Bank, *Water Supply and Sanitation in Timor-Leste, Turning Finance into Services for the Future*, April 2015.

UNDP, Project Management Training to municipalities staff, Provided three- day training to DDOs, CDOs, Chief Of departments from line ministries from Baucau, Aileu, Ainaro, Manufahi, Liquica and Ermera June 2016 (50 participants)

UNDP, REPORT KAD MEMBERS TRAINING, Ramelau Hotel, 19 – September – 2014 (42 attending)

UNDP, South-South learning exchange visit to the Promoting Climate Resilient Infrastructure in Northern Mountain Provinces of Vietnam Project (PCRINMP) 20-25th September 2015.

UNDP and GEF-LDCF SSRI Project, Annual Performance Report (APR) 2014, Reporting Period: 1 January to 31st December 2014.

UNDP and GEF-LDCF SSRI Project, Annual Performance Report (APR) 2015, Reporting Period: 1 January to 31st December 2015.

UNDP/GEF, ANNEXES, Strengthening the Resilience of Small Scale Rural Infrastructure and Local Government Systems to Climatic Variability and Risk, Dec. 2012.

UNDP-GEF SSRI Project: Municipio of Ermera and Liquica Pre-qualified Contractors' Training Workshops Report, 15-16th January 2015.

UNDP/UNCDF, Government of Timor-Leste, Programme document, Local Governance Support Programme Timor-Leste (LGSP-TL), January 2007.

J. Vong, National Capacity Development Framework for Strengthening Municipalities to Build Community Resilience in Timor-Leste, June 2017.

Annex 6: List of Contacts

Date	Location	Name	Affiliation
Oct 23	Dili	Devindranauth Bissoon	Project Manager/CTA, SSRI Project, Resilience Building Unit
		Bernadete da Fonseca	Project Coordinator, SSRI Project
		Reinaldo da Costa	Engineer, SSRI Project
		Nelson Vicente	Engineer, SSRI Project
		Ermelinda Amaral	Finance and Procurement officer
Oct 24	Dili	Miguel Carvalho Pereira	Director General for Urban Management, MSA
		Herminio Moniz	Director, National Toponymy
		Mirko Gamez Arias	GIZ
		America Directris	Director, Pollution Control and EIA
		Joao Carlos	Director General, Environment and GEF Focal Point
Oct 25	Dili	Augusto Pinto	Director, Climate Change
		Peter Raynes	Director, CARE International
		Alex Grumbley	Country Director, Water Aid
		Eric Vitale	World Bank
Oct 25	Motaulun, Liquica	Joaquim Pereira	Local resident, farmer
	Eldeia placa	Valentinho da Silva	Local resident, farmer
		Felix Leite	Local resident, farmer
	Mota Ulun	Augustino de Jesus Goncalves	Project manager, Netil (NGO)
		Francisco Soares	Suco Head, Moa Ulan
Oct 26	Liquica	Domingos da Concecao	Administrator, Luquica Municipality
		Delio Santos	Engineer, Luquica Municipality
	Lisadilla (Lebae embankment)	Daniel Soares	Local resident
	Maubaralisa Suco	Fernando Lopes	Village Head
	Luculai Suco	Nicolau Lobato	Project coordinator, Maladway (NGO)
Oct 27		Marculino soares	Suco Head
	Laula village	Manual Monis	Representative, Los Angels Company (contractor)
		Unknown beneficiary	Local water point user
		Carlos Manuel Babo	Village Head
	Ermera Municipality	Jose Martina dos Santos	President of Authority, Ermera Municipality
		Joao Soares Madeira	Technical officer, Ermera
		Fernando Salsinha	Technical officer, Ermera
		Thomas da Silva	Director, Water and Sanitation Dept, Ermera Municipality
		Eusebio C.M.	Chief, Water and Sanitation Dept, Ermera
		Pedro de Deus Maia	Chief Sec., Water and Sanitation Dept, Ermera

Oct 30	Baucau	Antonio Guterres	President of Authority, Baucau Municipality
		Eduardo Filipe Ximues	DDO, Baucau Municipality
		Hermegildo R Fraga	Tec PDIM
		Florindo Caetono Pereira	Tec PDIM
		Joao Ernesto Lemos	Tec PDIM
		Baltazar Belo	Tec PDIM
		Alexandro Aparicio	Tec PDIM
	Buruma village	Bonefacio Jose Maria	Representative, Strive Co. road contractor
		Liborio dos Santos Freitas	Buruma Suco head
	Lacoliu	Augusto Freitas	Community representatives
		Celestinho Freitas	
		Marcelino dos Santos	
		Francisco Freitas Guterres	
		Santiago Cabral Belo	Lacoliu Saco head
Oct 31	Wailili	Cesario da Piedade Ximanes	Community representatives
		Marcos Soares Mauleki	
		Amancio Fernandes Freitas	Farmer
	Baucau Municipality	Augustino Guterres	Director, Dept of Agriculture
		Nelson Guterres	Director, Water and Sanitation, Baucau Municipality
Nov 3	Dili	Sunita Caminha Road	Head of Office, UN Women
	Dili	Simon Done	ILO – R4D Road engineer, Ministry of Public Works
		Un Yat	ILO- R4D Regional engineer, Ministry of Public Works
Nov 5	Dili	David Green	Soil Bio-engineering Group Chair, ADB Consultant
			57

Field Projects visited:

- Motaulun, Liquica water system
- Liasadilla river embankment
- Maubaralisa road rehabilitation
- Lukulai soil bio-engineering
- Lauala water supply system
- Lacoliu irrigation system
- Buruma road rehabilitation with bio-engineering
- Wailili irrigation system

ANNEX 7 - Summary of SSRI Project Achievements

Project Results and Indicators	Baseline Level	Target level at end of project	Reported Achievements <i>Extracted from reports as of November 2017</i>
Objective: Critical small scale rural infrastructure is climate resilient designed and implemented through participatory approaches and strengthened local governance systems, reflecting the needs of communities vulnerable to increasing climate risks.			
Number of (sector-specific) standard designs and specifications, for small infrastructure works, which have been upgraded to address and/or withstand increased climate risks	Designs for small scale infrastructure works insufficiently address present and projected increased climate variability, especially in terms of future water resource availability and intensity of extreme weather events, leading to capital loss due to inappropriate designs and unnecessary asset loss due to extreme weather events and inadequate maintenance	By the end of the project climate resilient designs are developed for all small scale infrastructure works constructed through the project and 75% of these climate resilient designs are accepted by national level sector agencies as the nation-wide standard design	20 infrastructure projects related to water supply systems, reservoirs and irrigation systems, rural access roads and bridges, and river embankment/flood protection implemented in the three municipalities (districts). These include, 6 rural roads/bridges, 1 flood protection/river embankment, 2 irrigation schemes and 11 water supply systems (one of them implemented by local NGO, all other infrastructure projects implemented through 20 pre-qualified and trained local companies). Existing infrastructure and new small-scale infrastructure were strengthened by providing soil-bio-engineering interventions and planting local plants and grasses.
Percentage change in number of sub-district level annual development plans, which include climate risk mitigation/resilience measures, as climate resilient activity designs (of small infrastructure works) and complementary bio-engineering and land management measures (AMAT 1.1.1.1)	Within the existing participatory local planning process, localized climate risks and –vulnerabilities are not analyzed, and climate risks for small infrastructure works are not understood, nor planned and budgeted for.	By the end of the project a minimum of 50% of sub-district annual development plans in the project areas include at least 3 specific climate risk mitigation/resilience actions	Ministry of Public Works enhanced standards for rural roads in collaboration with the national bio-engineering working group led by the Ministry of Public Works, Transport and Communications. Support to MoPW/R4D program on rural roads in the 3 focus municipalities. Lessons learned and best practices were shared including soil-bio-engineering and innovative catchment stabilization approaches
			New projects have been identified for funding by the Municipality Investment Plan (PIM) for implementation in three focus municipalities, including climate resilient design features which have been endorsed by the municipalities.
			Revisions to rural water supply guidelines {???
			At least 8 administrative posts (sub-districts) out of a total of 65 in Timor-Leste now include climate risk mitigation/resilience measures, as climate resilient activity designs (of small infrastructure works) and complementary bio-engineering and land management measures. Climate Change Adaptation Planning for Rural Infrastructure Development (CCAPRID) initiative conducted in 30 villages (Sucos) with 148 sub-villages/aldeias and the participation of Suco Development Council members. Training and capacity development to the village representatives in identifying and preparing annual proposals under PDIM for infrastructural investments in the villages.

Outcome 1: Policy makers and the public in Timor-Leste are aware of critical climate risks to rural (infrastructure) development and are systematically being informed on up to date evidence-based information on climate hazards through vulnerability assessment and cross government coordination mechanisms.				
Number and type of stakeholders served by the multi-sector knowledge sharing and policy influencing platform of MCIE	Policy makers have little awareness and understanding of climate risks on sector development goals, sector policies do not or insufficiently address climate risks and vulnerabilities	At least 5 platform members from relevant National Directorates and 2 members each from (or one representative organization): Local Administration, Civil Society, private sector, International NGOs, education institutions	Two multi-sector knowledge sharing and policy influencing platforms namely the Climate Change Adaptation Technical Working Group (CCA-TWG) and the Centre for Climate Change and Biodiversity (CCCB) has been established. These platforms are led and coordinated by a national counterpart agency (NDCC at MCIE - Ministry responsible for climate change and the environment).	Primary data on the impacts of climate risks and extreme events on existing rural infrastructure collected and analyzed for the Ministry of Commerce Industry and Environment (MCIE) to inform its policy advocacy. Climate Vulnerability and Capacity Assessment (CVCA) study conducted in the three SSRI focus municipalities – Ermera, Liquica and Baucau. CVCA Report and Risk Maps prepared and final report published and disseminated. Technical assistance and support provided to the National Directorate for Climate Change on drafting the National Climate Change Policy. The first and second national conference on climate change adaptation were held in 2014 and 2017 respectively supported by the project including field visits to selected project sites and the national climate change adaptation exhibition. The project supported the establishment of the Centre for Climate Change and Biodiversity (CCCB) and the development of a web portal (http://www.cccb-tl.org/) Lessons learned and best practices in the implementation of water supply projects and on soil-bio-engineering and innovative catchment stabilization approaches for rural roads shared with many stakeholders.
Number of evidence climate change risk/vulnerability assessment reports and policy recommendation documents , timely disseminated through the knowledge sharing and policy influence platform	Due to sector fragmentation little exchange of knowledge, lessons and experiences takes place, existing platforms are shaped around national programmes (like NAPA working group) but do not function adequately outside the framework of these programmes due to limited capacity of MCIE/NDIEACC for multi-stakeholder process facilitation and sector leadership	At least five evidence-based policy influencing documents disseminated through the platform At least 4 sectors have formally endorsed the MCIE climate change policy framework and strategy and have translated or integrated climate risk concerns into at least 1 sector policy		
Number of sectors which have endorsed MCIE's national climate change policy framework and strategy, and which have subsequently translated and/or integrated climate risks in key sector policies				
Outcome 2: Local Administrations integrate climate risks into participatory planning, budgeting and standards of small scale rural infrastructure				
Climate change vulnerability guidelines and tools developed under the project are accepted by MSA as integral part of local	Within the existing participatory local planning and budgeting process, at present localized climate risks and –vulnerabilities are not analyzed, and	By the end of the project the climate change vulnerability guidelines and tools have become an integral part of the national local planning and	Climate Vulnerability and Capacity Assessment (CVCA) guidelines developed for 8 sub-districts (now called Administrative Posts) in the three SSRI municipalities – Ermera, Liquica and Baucau. The study (conducted by CARE International) mapped climate risk hotspot areas resulting from landslide, erosion and flood hazards and ranking them under categories of high, medium or low. Climate Risk Maps were produced for eight sub-districts (Administrative Posts): Baucau - 3, Liquica - 3 and Ermera - 2. Overall a total of 24 climate risk	

planning and budgeting process (Yes/No)	climate risks for small infrastructure works are not understood, nor are resilience and protective measures planned and budgeted for.	budgeting process as endorsed by MSA	maps were produced showing the level of vulnerability to potential climate hazards affecting each sub-district.
Percentage of Sub-districts which use climate change vulnerability assessments and CC adaptation activity identification guidelines/tools as integral part of the local development and planning and budgeting process [AMAT 1.1.1.3]	Local Administrations have little understanding of their role in terms of ensuring climate resilient development and climate risk resilient small scale infrastructure	At least 75% of Sub-districts in 3 Districts use the new climate change vulnerability assessments and have identified and implemented climate resilient designs and climate risk protection measures for small scale infrastructure works	CVCA looked at 186,548 ha. of land and identified approx. 14,000 hectares of degraded hotspot areas affected by landslides and approx. 41,649 ha of land considered as high-risk of erosion that require rehabilitation in 8 selected administrative posts.
Number of (district) engineering and contractor staff in focus Districts with a solid understanding of climate-induced risks to small scale infrastructure works and of possible adaptation and mitigation measures (design, construction, maintenance)	Engineering staff and contractors at District level have very little understanding of requirements for climate resilient infrastructure development	By the end of the project at least 200 (district) engineering and contractor staff have a solid understanding of climate-induced risks to small scale infrastructure works and of possible adaptation and mitigation measures (design, construction, maintenance)	The database of climate risks provides information for planning and development of rural infrastructure investment and for awareness about the magnitude and level of climate risk to the local communities.
			The CVCA guidelines were applied in the planning processes at the village level in 8 sub-districts (12.3 % of all sub-districts in Timor-Leste). Climate Change Adaptation Planning for Rural Infrastructure Development (CCAPRID) in the 8 selected sub-districts (APs) provided training and capacity development for members of 30 village (suco) councils involved in planning and developing new proposals for community development.
			223 (46 F, 177 M) representatives from local pre-qualified contracting companies participated in training in 2014 – 2016. The workshops conducted at the district levels aimed at developing understanding of climate-induced risks to small scale infrastructure works and of possible adaptation and mitigation measures.
			20 local construction companies were contracted in 2015 - 2017 to implement rural infrastructure projects. They are now better equipped with the skills required to implement climate resilient rural infrastructure projects.
			A detailed capacity assessment for municipalities was conducted along with the National Capacity Development Framework for Municipalities (NCDFM) which outlines key interventions required at the municipality levels to enhance its organizational, functional and technical capacities within a 5-year period. The project supported institutional strengthening and training for staff from six municipalities. Key areas of focus include project and contract management for technical staff in 3 municipalities (50 participants), comprehensive GIS training was conducted with representatives from municipalities (39 participants), communication management and strategy development (33 participants including local media/community radio), climate change adaptation planning and bio-engineering for local authorities (chief of villages and aldeias) with more than 100 staff participating in these training events/workshops. The project also facilitated participation of national and local level staff in regional exchanges to Vietnam and Lao PDR to share lessons learned and gain

				<p>hands-on experience on planning and budgeting for climate resilient rural infrastructural development. At least 3 municipalities can now develop and design climate resilient rural infrastructure with better capacity for monitoring and supervision during implementation phase. More than 200 engineering and contractor staff in focus Municipalities have a better understanding of climate-induced risks to small scale infrastructure works and of possible adaptation and mitigation measures (design, construction, maintenance).</p> <p>CCAPRID activities implemented in three municipalities provided capacity development for villages to plan, prioritize and proposed new infrastructure while at the same time identifying ways in which existing infrastructure can be strengthened and protected against climate induced disasters. A total of 246 persons participated (113 F, 133 M) in the soil-bio-engineering training events that were conducted in 13 villages.</p> <p>10 local NGO were engaged in the implementation of various complementary soil bio-engineering and watershed management activities. Overall at least 30 staff from local NGOs were trained on the various soil-bio-engineering techniques that can be applied in the hazard prone locations. By the end of the project, at least 5 of these NGOs have demonstrated sufficient capacity to take on new projects and mobilizing communities to effectively implement complementary watershed management activities and climate proofing of rural infrastructure</p>
Outcome 3: Small scale rural infrastructure made resilient against climate change induced risks (droughts, floods, erosion and landslides) in at least the 3 Districts of Liquiça, Ermera and Baucau. (Physical Investment Component)				
Number of Local Administrations (Districts and Suco's) which invest in climate resilient small rural infrastructure works, including complementary soil and land management measures as integral part of the local infrastructure development process	Designs for small scale infrastructure works, implemented at the Local Administration level, are often prepared by national level sector departments or agencies. These designs are at present not climate resilient, nor adapted to local conditions. Local Administrations also lack the capacity to make climate resilient	In at least ten sub-districts in 3 Districts, various new small scale infrastructure works are constructed in accordance with the new climate resilient designs and additional measures are implemented to safeguard existing infrastructure works against climate risks, benefitting at least 100,000 people.*	Infrastructure projects in the three focus districts included more than 10 water supply systems, 2 irrigation schemes, 1 river embankment protection, 6 rural road construction/rehabilitation projects and small bridges and culverts rehabilitation. The infrastructure delivered provides direct benefits and improvement in the social and economic status of rural beneficiaries. Overall 20 contracts were awarded to local construction companies to implement infrastructure projects that also include soil bio-engineering interventions in high risk areas/hot-spots vulnerable to climate induced risks such as erosion and landslides.	
Number of people benefiting from climate resilient small scale		At least 100,000 people benefited from climate	The project engaged national and local NGOs and CBOs in the Municipalities of Baucau, Liquiça and Ermera to implement bio-engineering activities to new and existing rural infrastructures including water supply systems, roads and bridges and river bank protection providing protection against climate change induced risks (droughts, floods, erosion and landslides). A total of 12 micro-capital grants were awarded to 10 local NGOs in two phases from December 2015 – June 2017 to implement watershed management and complementary soil-bio-engineering activities for catchment stabilization. Watershed	

<p>infrastructure works which are constructed in accordance with resilient designs in the three project focus Districts (target 100,000) [AMAT 1.2.1.2]</p> <p>Coverage in Hectares of complementary soil and land management measures in 3 Districts (target 50,000)</p>	<p>designs and to construct in accordance with required higher quality standards.</p>	<p>resilient small scale infrastructure works in the 3 focus Districts</p> <p>A minimum of (total) 50,000 hectares of catchment stabilization measures have been implemented.</p> <p>*** Note: The 50,000 hectare target was deemed overly ambitious and reduced to 5,000 hectares during the inception workshop (refer to inception workshop report.</p>	<p>management activities included community level bio-engineering demonstration plots and replication support, planting trees, building check dams, and terracing.</p> <p>The grants were provided in two phases to engage and involve communities to implement complementary water shed management activities. In the first phase, five (5) local NGOs received grants to implement watershed management in selected hotspot locations (2 in Liguica, 2 in Baucau and 1 in Ermera) based on CVCA findings. There were approximately 8,895 indirect beneficiaries (3,134 females and 5,761 males), and about 260 (160 female and 100 male) direct beneficiaries from the activities. Under Phase 2, seven NGOs implemented bio-engineering activities in different locations within three municipalities. The total area covered during the implementation of bio-engineering activities is 33.63 hectares benefiting a population of 11,674 (4,774 female).</p> <p>The activities also included the dissemination of information for wider adoption of the techniques used for strengthening infrastructure and establishment of traditional laws (Tara Bandu) that aims to protect the environment by restricting the cutting and burning of trees and grasses and other related activities that can eventually destroy the environment and its ecosystem. The total area of land protected through Tara Bandu activities is approximately 34 ha in 4 villages.</p>
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* Original target of 10 sub-districts was reduced to 8 during the Inception Phase.

ANNEX 8: Summary of SSRI Field Projects

SSRI Project Phase II

Municipality	No	PROJECT NAME	Date of Contract	Final Completion Date *	Achievement (%)	Contract value USD	Description of Works	Soil-bio-engineering activities + coverage in hectares	Beneficiaries
Baucau	1	Agia Water Source Protection and Irrigation (0.8 Km) in Suco Uailili Administrative Post Baucau Vila	16-Aug-16	25-Aug-17	100%, physical infrastructure completed, limited bio-engineering component to protect the water source. The community members use the system for farming and growing vegetables year-round and different crops are being planted but no clear about sustainability	90,632.87	Rehabilitation retaining wall in water source – 47 meters Construction of Channel irrigation 576 m ² with length 800.20 meters. Gabions installation to protect water source– 95 m ³ . 10 units check gate installation for water control.	- implementation of soil bioengineering component in water source area and area for paddy field. - Soil stabilization using plants such as vetiver grass, elephant grass and areca nut tree. (Area coverage around 50 M ²)	- Total beneficiaries: 3,471 (Female: 1,708, Male: 1,763)
	2	Rehabilitation of 2.77 Km of Road in Buruma from Wamutu to Afatalakai and Waimatame Suco Buruma, of Administrative Post Baucau Vila	16-Aug-16	24-Aug-17	100%, the road was rehabilitated with good quality, community can now better access markets, schools etc. However, some plants did not grow well in some sections due to lack of protection for the grass planting.	171,028.68	-Stone masonry for Retaining wall and drainage 650 m ³ -5 units of Pipe culvert and 2 units of box culvert -Construction of plumb Concrete 183.6 m ³ -Gabions installation 162 m ³ -Construction of causeway 7.2 m ³ -Graveling	- Bio engineering implemented along several sections of the road including planting on the road shoulders for erosion control, plus using as vetiver grass, gamal, amare fuik and bamboo planted around in high risks hotspots sections and landslide area and implemented bamboo check dam.	- Total beneficiaries: 4,705 (Female: 2518, Male: 2187) - Number of Aldeias /sub-villages – 3

[illegible]

						housing and washing units				
5	Rehabilitation of Road in Suco Dato Administrative Post of Liquica Vila	10-Aug-16	10-Nov-17	100% reported, the evaluation team didn't visit the site	120,030.21	<ul style="list-style-type: none">- Scope of works include plum concrete work- 418 m3- Gravel work – 528 m3- Drainage structures- Soil bioengineering (check dam, grass planting, trees planting)	<p>The soil stabilization approaches to address erosion and landslides along sections of the roads include vetiver grass planting is 550 m2, trees plantation cover 350 m2 along the road and in critical sections at risk from landslide; Installation of bamboo check dam 520 m2 along the road</p>	<ul style="list-style-type: none">- Total beneficiaries: 9,314 (Female: 4,664, Male: 4,650)- Number of Sucos - 4		
6	Rehabilitation of Road in Suco Metagou Administrative Post of Bazartete	24-Oct-16	10-Oct-17	78.71%, some of the items of the project were not implemented, the contractor was not able to complete the project Project completion certificate issued and hand-over to MPW R4D programme for maintenance at 78.71 % of contract value in accordance with GCC	70,975.00	<ul style="list-style-type: none">- Plum concrete work- 242.4 m3- Graveling work – 793.35 m3- Gabion retaining wall – 96 m3- Box Culvert – one unit- Masonry side drains – 13.5 m3	<p>Implementation of soil bioengineering activities that include planting of vetiver grass and other species of vegetation, and combining with the installation of gabions at high-risk sections is 375 m2 in along the road trees planting covers approximately 320 m2 along the road</p>	<ul style="list-style-type: none">- Total beneficiaries: 7,879 (Female: 3,872, Male: 4,007)- Number of Aldeias - 2		

	Sub-Total (Liquica)										
Ermera	7	Water Supply Installation Project (3 Km) in Suco Poetele of Administrative Post Ermera	23-Aug-16	04-May-17	100% reported, the evaluation team didn't visit the site		92,889.76	- Construction of RC water intake structure and installation of galvanized reservoir – 60 m3, and 7 public taps - Gravity-fed water supply with installation of transmission mains – 3.6 km and distribution pipes – 0.450 km	- Protection of water source and other soil stabilization approaches implemented such as planting of elephant grass, gamal planted in around of intake and live fence. (Area Coverage around 150 M²)	- Total beneficiaries: 1,175 (Female: 615, Male: 560) Number of Aldeias - 3	
	8	Water supply installation project suco Hatolia (3.5 km), Administrative Post Hatolia	23-Aug-16	10-Apr-17	100% reported, the evaluation team didn't visit the site		74,641.17	- Construction of RC water intake structure and installation of galvanized reservoir – 60 m3, and 11 public taps - Gravity-fed water supply with installation of transmission mains – 1.475 km and distribution pipes – 2.1 km	Protection at water source and intake structure, elephant grass planting, bamboo planting and banyan tree covering 750 m² and live fence at all the public taps	- Total beneficiaries: 418 (Female: 216, Male: 202) Number of Aldeias - 2	
	9	Road Construction in Suco Manusae Administrative Post of Hatolia	23-Aug-16	30-Oct-17	50%, the construction of bridge as planned in the project document was not carried out due to some predictions on the climate condition that would not allow the project to be fully completed. The area is always covered by rainfall which makes it difficult to complete the		137,152.44	The design includes total length of road for rehabilitation and widening = 5 KM from main road to Suco Plum concrete = 839 meters in 13 critical sections with slope/gradiant	- Several interventions were provided to address critical climate change hazards risks to the road. These include soil bioengineering implemented which include the vetiver grass, gamal, amare fuik and bamboo	- Total beneficiaries: 24,777 (Female: 12,304, Male: 12,473) The road provide linkage between two villages (sucos) and a	

					work. The project then shifted to road rehabilitation which has achieved 50% completion. ³⁹	greater than 30 degrees, 1.19 km of compacted gravel base and all-weather surfacing. Construction of 500 meters of masonry drainage and 121 meters of concrete causeway constructed in several locations to facilitate drainage and water discharge. Gabion installation and implementation of soil-bioengineering	planted in combination with check-dams and use of gabions to protect and safeguard critical sections.	number of aldeias
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³⁹ The original design was for a RC bridge construction across the river. However, due to the delay in commencement of implementation of the project and the extreme weather causing the existing road to deteriorate and becoming inaccessible, the beneficiaries/community requested that the Government/municipality review the project. From the new consultation held with the community their priority was no longer for the bridge to be built since it will still be inaccessible because of the condition of the access road. 5km of road was included in the revised contract. However, due to the nearing of project closure, the full scope of the works was not realized. However, it was completed in a manner that ensured that the community and coffee farmers could access it and providing safeguards from future landslides and erosion along critical and high-risk sections. The road was handed over to the Ministry of Public Works R4ID programme for full maintenance and future annual maintenance planning. Project completion certificate issued and hand-over to MPW at 52.9% of contract value in accordance with GCC.

10	Water Supply Installation Project in Suco Lauaia Administrative Post Errera	24-Sep-16	29-Aug-17	100%, the installation of the system completed successfully. The village has two water systems, one installed by government through PNDS program, one installed by SSRI project.	\$94,969.50	-	Construction of water intake structure/tank , galvanized reservoir – 80 m³ and 16 public taps Installation of transmission mains – 3.75 km and distribution pipes – 2.75 km Installation pipe to existing tank through over flow pipe from new Galvanize tank – 90 m3	- Bio Engineering implemented which include planting of vetiver grass and mahoni tree planted around water reservoir area (50 m²)	-	Total beneficiaries: 1,420 (Female: 714, Male: 706) 2 aldeias (sub-villages) in Lauaia village benefitted from this water supply project.
Sub-Total (Errera)										
Grand Total					944,374.47					

SSRI PROJECT PHASE I

Municipality	Project	Date of Contract	Final Completion Date*	Achievement (%)	Contract Value (USD)	Description of Works	Soil-bio-engineering activities + coverage in hectares	
Baucau	1	10 June 2015	04 May 2016	100% reported, the terminal evaluation team didn't visit the site.	21,146.66	-Construction of source protection with corrugated roofing at the water source and sealing of crack on wall of spring box -Rehabilitation of water intake/ capturing	No soil-bioengineering intervention provided at this site	- Total beneficiaries: 8,156 (Female: 4,049, Male: 4,107)
	2	10 June 2015	10 June 2016	100% reported, the terminal evaluation team didn't visit the site	82,931.06	-Construction of water intake structure and concrete reservoir ~ 20 m3, distribution tank (2 units - corrugated tank (BPT) with capacity 5.5 m3 each) and 6 new and 7 rehabilitated public taps. - Gravity-fed water supply with installation of transmission mains ~ 5 km and distribution pipes ~ 2 km and cable crossing over river	Soil bioengineering interventions on this site were implemented by local NGO including planting gamal, vetiver grass, bamboo trees and terracing approaches to protect critical components of the water supply systems such as the reservoir, public taps.	- Total beneficiaries: 1,067 (Female: 503, Male: 564) Number of aldeias - 2
(4 projects)								

Ermera	3	Water supply installation project – Aldeia Uatu-ua	10 June 2015	29 April 2016	100%, reported the terminal evaluation team didn't visit the site.	76,337.24	-Construction of water intake structure/tank and installation of galvanized reservoir – 60 m3, and 7 public taps - Gravity-fed water supply with installation of transmission mains – 1.475 km and distribution pipes – 2.1 km	Soil bioengineering interventions on this site implemented by the construction company include planting bamboos at the water source, protection of the reservoir	- Total beneficiaries: 4,962 (Female: 2,309, Male: 2,653). Number of Aldeias - 3
	4	Construction of new irrigation scheme – Suco Lacoliu	10 June 2015	09 May 2016	100%, completed the system, but less vegetation activities/vegetable farming were observed after farming paddy. The land are now use for multiple purposes such as rice farming, planting vegetable crops and also fish rearing.	127,595.08	-Installation of 3 intake sources (galvanized pipes) collecting water from different sources -Concrete reservoir - 225 m3 capacity -550 meters of masonry (lined) irrigation channel	Vetiver grass along irrigation channel area	- Total beneficiaries: 1,285 (Female: 689, Male: 596)
	5	Water supply installation project suco Talimoro	08 June 2015	25 April 2016	100% reported, the evaluation team didn't visit the site.	64,356.99	-Construction of water intake structure/tank, Concrete reservoir – 20 m3, and 9 public taps - Gravity-fed water supply with installation of transmission mains and distribution pipes – 3.4 km	Soil bioengineering interventions – water source/intake protection with live stakes and bamboos Planting vetiver grass at the erosion and landslide hotspots along pipe route	- Total beneficiaries: 927 (Female: 462, Male: 465). Number of Aldeia - 1

(4 projects)	6	Water supply installation project suco Leirema	08 June 2015	22 May 2016	100% reported, the evaluation team didn't visit the site.	79,690.33	-Construction of water intake structure/tank, Concrete reservoir – 20 m3, and 16 public taps - Gravity-fed water supply with installation of transmission mains – 2.75 km and distribution pipes – 2.5 km	Water source/intake protection with live stakes and bamboos Planting vetiver grass at the erosion and landslide hotspots along pipe route	- Total beneficiaries: 489 (Female: 246, Male: 243) Number of aldeias - 1
	7	Water supply installation project suco Lemeia Kraik	08 June 2015	18 April 2016	100% reported, the evaluation team didn't visit the site.	80,070.67	-Construction of water intake structure/tank, Concrete reservoir – 20 m3, and 8 public taps - Gravity-fed water supply with installation of transmission mains – 5.2 km and distribution pipes – 1.5 km	Soil bioengineering interventions – water source protection with live stakes	- Total beneficiaries: 450 (Female: 223, Male: 227) Number of aldeias - 1
	8	Bridges rehabilitation project in Suco Leguimea	08 June 2015	29 August 2017	Project hand-over at 77% of contract value in accordance with the General Conditions of Contract for measured works completed as per the design, BOQ and technical specifications. Project currently being maintained by R4D (MoPW).	172,244.22	Work include the construction of small bridges and culverts (3 box culverts, and 6 pipe culverts), completion of gravel base, masonry drainage, gabion retaining wall and plum concrete surface.	Combination of vetiver grass and live stakes approximately 5,250 m2 along the road and critical sections	- Total beneficiaries: 2,828 (Female: 1427, Male: 1401) Number of aldeias - 6

Liquica (2 projects)	9	Road rehabilitation (1.6km) – Aldeia Nunuleta and Darulema, Maubalarissa	12-May-15	15-Sep-17	100%, completed the system, but less vegetation activities were observed.	119,864.41	Box culverts, concrete causeway, drainage, gabion retaining wall installation and plum concrete surfacing	Implementation of soil stabilization approaches in several sections of the road. Combination of gabion with planting of amare fuik as live stakes, in other sections include vetiver grass planting, live stakes/amare fuik along critical sections of the road covering approximately 666.67 m ²	- Total beneficiaries: 8,871 (Female: 4,345, Male: 4,526) Number of Aldeias - 2
	10	New river protection (gabion) construction 435m – Kakae River, Lisadilla	12-May-15	08 April 2016	100% completed	133,418.25	Gabion retaining wall with vegetated embankment (3 meters height) x 435 meters length	Combination of vegetated earthen embankment with the gabion wall, planting of vetiver grass, live stakes and bamboo covering over 1,740 m ²	- Total beneficiaries: 2,959 (Female: 1,506, Male: 1,453)
10 Projects		TOTAL				957,654.93			

Source: SSRI Project PIU, November 2017 and February 2018

* Date of Certificate of Definitive Completion (after completion of retention period).

ANNEX 9: EVALUATION CONSULTANT CODE OF CONDUCT AGREEMENT FORM

Evaluators:

1. Must present information that is complete and fair in its assessment of strengths and weaknesses so that decisions or actions taken are well founded.
2. 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 discreetly 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 stakeholders. 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.
6. Are responsible for their performance and their product(s). 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 Form³⁰

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

Name of Consultant: Alan Ferguson

Name of Consultancy Organization (where relevant): Regional Consulting Limited

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

Signed at *(place)* Vancouver on October 20, 2017

Signature:



ANNEX 10: EVALUATION REPORT CLEARANCE FORM

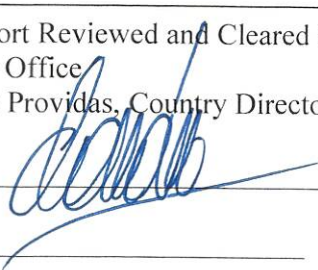
(to be completed by CO and UNDP GEF Technical Adviser based in the region and included in the final document)

Evaluation Report Reviewed and Cleared by

UNDP Country Office

Name: Claudio Providas, Country Director

Signature: _____



Date: _____

27/5/2018

UNDP GEF RTA

Name: _____

Signature: _____

Date: _____