EU-GIZ ACSE Final Project Report

Federated States of Micronesia

Project Title: Protecting islands through Learning and Leading in Adaptation and Renewable energy Education programme (PILLAR-Ed)

FA: 81207079

December 2016 -April 2020

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Contents

Introduction 3
1. Strategy 4
1.1 Project Background, Objective and Outcomes 4
1.2 Description of Outcomes and Outputs 6
1.3 Major variations and changes in the project outline against the PDD 8
1.4 Capacity Development Strategy 9
2. Cooperation System 11
2.1 Stakeholders 11
2.2. Steering Structure 12
3. Plan of Operations 14
3.1 Actual work implementation plan. 14
4. Results Oriented Monitoring 18
4.1 Summary of Results 18
4.2 Monitoring and Evaluation Plan 23
4.4 Summary of Project Outputs, Visibility and Validation Products 28
4.3 Contribution to ACSE Programme Indicators 30
5. Visibility and Learning 43
5.1 Project Visibility 43
5.2 Learning 43
6. Annexes 44

Introduction

This report is the progress report (referred to as Annex 7 in the Financing Agreement) for the project: Protecting islands through Learning and Leading in Adaptation and Renewable energy Education programme (PILLAR-Ed) – PDD6; implemented in the Federated states of Micronesia (FSM), and funded by the European Union (EU) under the EU-GIZ Adapting to Climate Change and Sustainable Energy (ACSE) Programme. The reporting period covered is June to December 2019 including January to March 2020.

The report is structured to align to the GIZ "Capacity Works" Development Model and its Success Factors for capacity development.

These Success Factors as applied under EU-GIZ ACSE are:

1. **Strategy:** Summary of project context, objectives, planned activities and outcomes – As embodied in the Project Design Document (PDDs);
2. **Cooperation systems:** Key, primary and secondary actors;
3. **Steering:** Stakeholder participation in implementing and steering the project; attaining project results based on operational planning and monitoring;
4. **Learning and Innovation:** Evaluations, knowledge attainment, distillation and sharing of knowledge at programme and project level.

1. Strategy

*Table 1: **Summary of project start up documents***

Annexes	Project Start Up and Management
	141209_FSM_Concept Note_FSM6
	150119_FSM_Concept Note Evaluation-FSM6
	150422_EU-GIZ ACSE_FSM-MoU
	161207_EU-GIZ ACSE_FSM6-FA-Eng-81207079
	161207_EU-GIZ ACSE_FSM6-FA-Ger-81207079
	161207_EU-GIZ ACSE_FSM6-SA-81207079
	161207_EU-GIZ ACSE_PDD-FSM06-81207079
	170517 FSM6 Congresssional Resoultion No. 20-12
	181112 FSM6_ FA 81207079_Addendum 1
	191029 FSM6_ FA 81207079_Addendum 2
	201202 FSM6_ FA 81207079_Addendum 3

1.1 Project Background, Objective and Outcomes

Background

The Federated States of Micronesia (FSM) is directly facing the challenges associated with climate variability and change. Simultaneously, the FSM is highly dependent on imported petroleum fuels – FSM currently spends approximately US$50 million on fuel imports. Most fuel is used for electricity generation and transportation. For electricity there is an average tariff of US$0.50 per kWh, which for the average wage earner can be a challenge – noting that the minimum wage for the FSM is US$1.75 per hour. The FSM national energy policy has set a renewable energy (RE) target of 30% and energy efficiency (EE) target of 50%. The current priorities for the FSM as outlined in the respective state energy action plans identify the need to increase the penetration of renewable energy and improved energy efficiency. Transitioning to increased use of sustainable energy options will benefit the FSM economy and quality of life.

In the FSM, on average, 37.6% of schools have access to electricity. In 2009 the FSM education sector spent US$4,789,855 on *other current expenditures*, it is likely a significant portion of these running costs went to energy, either for electricity or transport to isolated schools[1]. The FSM Strategic Development Plan 2004-2023 states that, "on most islands, schools have no electric power or running water and available water is of poor quality[2]".

Electricity supply at the four states is provided by four independent power utilities. The power utilities' past experiences with post pay customers on monthly tariffs incurring high debts have all the state utilities reverting to prepayment meters for ease of debt and revenue collection. The number of customers has increased over the past years particularly in the residential sector. It is estimated that 2400 customers still do not have access to prepayment meters.

Potential funding for the FSM over the period 2014 – 2020 is about US$47m in grants for energy sector development. A portion (EUR 325,000 equivalent to about US$366,000 and EUR 450,000 equivalent

[1] JEMCO. 2009. JEMCO Resolution Compendium. http://kolonia.usembassy.gov/uploads/oT/_H/oT_HwK3HodU6IWoLBlNieA/2009-09-jemco-resolutions.pdf

[2] FSM Strategic Development Plan 2004-2023, volume 3, page 87.

to about US$507,000) of this is from ACSE. FSM's current total capacity (conventional) is about 12.1MW. Based on current activities installed renewable energy capacity is 1.9MW as at December 2014. The recent concluded ADB technical assistance on strengthening of the legal framework and investment plans has recommended 6MW of renewable energy for Pohnpei and 2.5MW for Chuuk. This is in addition to the already approved 1.5MW for Yap. Further, for Kosrae a 1.65MW is envisaged. These adds-up to 13.55MW for the FSM, which is equivalent to about 2.71MW net of renewable energy or 70% of the renewable energy target.

Climate change impacts of notable concern include: extreme temperatures, sea level rise, ocean acidification, and heavy rainfall leading to flooding and landslides.[3] Some of the low-lying coral atolls in the north Pacific are especially vulnerable to sea level rise, storm surges, coastal inundation and salination of water lenses. Rising sea levels also exacerbate the pressure on fresh water lenses in these atoll environments and while an overall increase in rainfall is projected, the populations' reliance on water catchments for storage (as opposed to the water lens) will increase. The FSM has also experienced the cyclical effects of the El Niño, La Niña Southern Oscillation Cycle (ENSO) – related weather anomalies. Such climate variability is associated with drought; that often leads to: water shortages, crop failures, food shortages, and fires.

Despite the risks associated with climate change, there is a general lack of community awareness and preparedness for climate change and the natural hazards associated with them. Key recommendations in Fletcher and Richmond's recent 2012 study of climate change impacts in the FSM include:

1. Need for a vigorous climate change education programme for local communities, non-governmental organizations, landowners, land-tenured decision makers, permitting authorities and staff, and the public.
2. Need for community-based adaptation that involves stakeholders throughout FSM and is consistent with the traditional community values inherent in Micronesian society[4].

The FSM ACSE has two components: Protecting islands through Learning and Leading in Adaption and Renewable energy Education programme (PILLAR-Ed); and the Enhancing investments in renewable energy and energy efficiency technologies in the FSM. The ACSE in the FSM is coordinated through the Department of Resources and Development and Department of Finance (national government) with SPC as implementing partner.

Objectives

Increase the resilience of communities to climate change impacts and contribute to sustainable development by increasing awareness and use of sustainable energy. Specifically the project will achieve the following:

Outcomes

- Increased community knowledge on climate change adaptation and sustainable energy
- Increased use of sustainable energy measures, where feasible, in schools in the FSM
- Increased use of sustainable energy measures at the FSM national government buildings
- Increased adaptation measures related to potential climate change impacts

[3] In 1997, heavy rains caused landslides leading to 20 deaths on Pohnpei (FSM government). These landslides were caused by the intense rainfall from tropical storm Jimmy.

[4] Fletcher, Charles & Richmond, Bruce. 2010. Climate Change in the Federated States of Micronesia – Food and Water Security, Climate Risk Management, and Adaptive Strategies. ftp://soest.hawaii.edu/coastal/Micronesia/FSM%20Appendix_ClimateChangeFSM.pdf

1.2 Description of Outcomes and Outputs

Table 2 aligns the planned outcomes with the planned outputs and describes the outputs as intended.

Table 2: Outcomes and Outputs descriptions

		Deliverables Descriptor	Revised Deliverables
PDD6: Protecting Islands through Learning and Leading in Adaptation and Renewable Energy – Education program (PILLAR-Ed)			
Outcome a	**Increased community knowledge on climate change adaptation and sustainable energy**	Informed communities on sustainable energy options and climate change adaptation measures	Communities were informed on these issues through the Energy Efficiency Retrofit work and the installation of water tanks as a measure of adaptation to climate change
Output a	**Educational and awareness materials on sustainable energy options and climate change adaptation measures developed, published and disseminated to participating communities**	Developed: 8 pull-up banners; 1 conference banner (6mx1m); brochures 1 A4-3 folds and A3-3 folds; 2 posters; 2 flyers (1-sided); 2 promotional stickers; 8 bill boards; 4 newsletters; 8 media releases	Promotional stickers and flash drives developed Booklet on Energy Efficiency in the Schools and Households
Outcome b	**Increased use of sustainable energy measures, where feasible, in schools in the FSM**	4 schools undergoing energy audits and energy efficiency retrofitting	6 schools underwent some form of energy audits, 1 Detailed, 3 preliminary and 2 Walk in Audits. 5 Schools and 1 Office participated in energy efficient retrofits.
Output b	**Installation of sustainable energy measures in selected schools across the FSM**	4 energy audits conducted in 4 schools; EE retrofitting completed in 4 schools; at least 10% reduction in electricity bills	4 energy audits conducted in 4 schools; EE retrofitting completed in 4 schools; at least 10% reduction in electricity bills

Outcome c	**Increased use of sustainable energy measures at FSM national government buildings**	All FSM national government buildings in Palikir retrofitted with energy efficient measures	All FSM national government buildings in Palikir retrofitted with energy efficient measures
Output c	**Installation of sustainable energy measures in the FSM national government buildings in Palikir**	EE retrofitting completed in FSM national government buildings in Palikir; 10% reduction in electricity bills	EE retrofitting completed in FSM national government buildings in Palikir; 10% reduction in electricity bills
Outcome d	**Increased adaptation measures related to potential climate change impacts**	4 schools /communities with climate change adaptation intervention results – access to water	6 schools/communities with climate change adaptation interventions with installation of 24 Water tanks of 1,500 gallons.
Output d	**Climate change adaptation intervention such as rainwater harvesting and storage systems improvement in schools /communities across the FSM**	4 schools /communities with improved rainwater harvesting and storage systems	6 schools /communities with improved rainwater harvesting and storage systems

1.3 Major variations and changes in the project outline against the PDD

Jan to December 2017:

In this reporting period, there were no major variations in the project outline against PDD6. However, the project agreed during the steering committee to change the focus of activities to concentrate on a state level, than across all 4 states. So, for the water tanks installations, the project will concentrate on Chuuk State schools, in particular, the outer-atoll island schools which are particularly water insecure. Similarly, the energy audit component of the project will focus on schools only in Kosrae state. This decision is made to reduce expenditure on travel and to ease project coordination, as coordinating supply and installation logistics for 1 school in 4 states would see a lot of the project funds spent on logistics, rather than delivering on the ground infrastructure.

Also, the timelines were shifted for commencement to begin in June 2017 (from the original plans of commencement in 2016) due to delay in acceptance of the ACSE project by FSM congress.

Jan to June 2018:

The project request for an extension of project timeline with no financial cost due to the delay in the implementation of the project as it commenced in June 2017. The extension requested is to 30 September 2019 as opposed to August 2018, the initial timeline for this project.

Project management at SPC changed due to the staff turnover at SPC. Two Energy Programme Staff Koin Etuati and Frank Vukikomoala are working together with the PMU based at the SPC Regional Micronesia Office, to effectively monitor, report, and support the implementation of the activities.

July to December 2018:

Project extension timeline extended to 30 September 2019. There is no change in budget and costs categories.

Jan to June 2019:

No major variation on the project

June to December 2019:

Project extension timeline extended from 30 September 2019 to 30 April 2020. This request for extension was to allow ample time to deliver remaining activity, inspection of the water tank installations and reporting.

January to April 2020:

No major variation as the project is to finish in 30 April 2020. Extension of timeline to complete remaining work relating to water tank delivery.

1.4 Capacity Development Strategy

Table 3. Capacity Development Strategy

Phase	Individuals	Organisations	Society	National level
	Competence development	**Organisational development**	**Development of cooperation systems**	**Development of enabling frameworks**
SWOT in the area of social concern	Maintenance Staff of the National Palikir Building and Schools are capable to carry out retrofit work, changing of energy efficiency appliances. Maintenance Staff/technicians need to improve on energy audit management skills, supervise day to day use of electricity including providing tips for cleaning Communities in outer islands and remote schools are actively contributed to the construction of water tanks and bases with supervision by the School Management.	Increase the number of technical staff of the Energy Division under FSM R&D to support implementation of energy projects, and more so to evaluate projects outcomes and results against the National Energy Master Plan.	Communities in Chuuk are engaged in the school renovation and water tanks installations.	FSM Energy Master Plan highlighted measures to improve energy use in national government buildings and schools.
Intended capacities	Improves capacity on energy efficiency and conservation tips Improves capacity on energy managements including cleaning and maintenance of lights and Air conditions in schools	Improves understanding of National Government targets on Energy Efficiency and to contribute to these targets.	Empowerment of communities on RE and Energy Efficiency and conservation.	Establish policy on energy efficiency and awareness and organisational set up
Activities	**KOSRAE STATE** - Energy efficiency retrofitting services for participating school **POHNPEI STATE**			Development of Net metering bill and regulations

	- Energy Efficiency (EE) retrofitting at the FSM national government offices in Palikir **CHUUK STATE** - Climate Change Adaptation (CCA) services for participating schools identified			
Interaction with other levels	Interactions with PUC and KUA, the utilities on the two states to provide electricity bills for the Palikir and Kosrae Schools. Interaction with UNICEF to provide baseline information on WASH for schools selected. LOA between SPC, R&D and the Department of Education in Chuuk and Kosrae. Liaised with DECEEM[5] on disaster impacts on the selected schools			
Complementarity activities by other projects/actors in the same line of action		RENI Projects on Water tanks installation in Pohnpei State Water tanks in Chuuk by IOM and UNICEF and DECEEM		

[5] Office of Environment and Emergency Management, FSM national government

2. Cooperation System

2.1 Stakeholders

Table 4 below lists project stakeholders including *key actors* responsible for decisions and activities related to the implementation of the project, *primary actors* which are positively or negatively affected by the project, and *secondary actors* with indirect or temporary involvement with the project.

Table 4 – Stakeholders

Stakeholder	Organization	Role
Key Actors		
Hubert Yamada – Assistant Secretary (Energy)	FSM national government Department of Resources and Development	Lead National Agency – focal contact at the FSM national government
Lara Studzinski	Deputy Director, SPC Northern Micronesian Office, SPC	Overall coordination with national stakeholders and provide oversight coordination and support when required.
Koin Etuati	SPC	Implementing Partner /Agency
	SPC (Energy Programme)	Project Manager – overall in charge of the implementation providing guidance and mentoring to the ICC and PA and advise to the Steering Committee members
Frank Vukikomoala	SPC (Energy Programme)	Assist the Project Manager – in project implementation and monitor of activities
Shanupriya Sharma and Shonal Gounder, Finance Officer & Finance Assistant	SPC (Energy Programme)	Financial Administrator – provides the financial updates and reporting requirements
Department of Resources and Development	FSM national government	Chair of the Steering Committee
Quincy Lawrence Department of Education	FSM national government	Steering Committee Member and work together on the water tanks technical designs
Major's Office	Chuuk State	Approves the selection of schools to install water tanks
Primary Actors		
Contract Offered (direct recruit by GiZ)	GIZ based at Micronesia Regional Office	GIZ Adviser, Christopher Frenkel based at MRO– compiles all reporting requirements and liaises with GiZ
Silverina Pretrick	SPC at the Micronesia Regional Office	Project Assistant – PDD6 & PDD7. Coordinates the day-to-day technical activities with the respective stakeholders – reference attached JD for details
General Managers	FSM State Power Utilities	Focal point with the power utilities particularly on the energy efficiency audits and management trainings at the state levels
Secondary Actors		

FSM as a country	FSM national government	Progress towards its national energy policy target on RE
Department of Education	Kosrae State	Progress towards reducing electricity consumption and costs in all schools
Mortlock Island Schools	Chuuk State	Progress towards improving water security days during droughts as number of water storage increased on the selected schools and communities on the atoll islands of Ettal, Sawantok, Kuttu, Oneop, Moch and Lekinioch.

2.2. Steering Structure

The actors who provide an important impetus for achieving sub-objectives, who are responsible for achieving objectives and sub-objectives of the project or who make political decisions participate in the steering structure of the project.

The function of this structure is to enable steering tasks to be performed, such as (e.g.) strategy, planning, coordination, control, monitoring, resource management and conflict management.

Table 4 shows participants of the steering structure that participate in the decision making process (e.g. working groups) or have a formal direct responsibility for decisions (e.g. steering meetings) in the steering of the project.

Table 5– Participation in the Steering Structure

Possible steering participants		
	Participation	**Responsibility**
Ms Jenny Brown	EU Delegation	Donor Representation
Hon. Marion Henry Secretary, FSM RND	Chair of the Steering Committee	Signs LOA
Mr Hubert Yamada Assistant Secretary (Energy), FSM RND	Focal contact at FSM RND	Overall coordination at FSM including
Secretary, FSM Department of Education (DOE)	Steering committee member	Coordination from DOE perspective particularly with respect to activities at schools
Vice President, FSMDB	Steering committee member	All activities with the FSMDB
DECEEM – Office of Environment and Emergency Management, FSM national government	Steering committee member	Represents the CC perspective
Gavin Pereira Technical Adviser, GIZ Suva	FSM ACSE Team member	Adviser and overall in charge of FSM ACSE from GIZ
Lara Studzinski, Director, SPC MRO	Steering committee member	SPC Executive representative
Rupeni Mario – Sustainable Energy Adviser	FSM ACSE Team member	Overall management of the project. Left the project in April 2017.
Koin Etuati, FSM ACSE Project Manager, SPC Geoscience Energy and Maritime (GEM) Division	FSM ACSE Team member	Overall coordination of implementation of the FSM ACSE

Christoph Frenkel Technical Adviser, GIZ MRO FSM	FSM ACSE Team member	Adviser of FSM ACSE – contract with GIZ completed in April 2019, left FSM end of March 2019.
Silverina Pretrick, FSM ACSE Project Assistant, SPC MRO	FSM ACSE Team member	On the ground day-to-day activities of the FSM ACSE. Contract completed end of February 2020.
Frank Vukikomoala, Energy Database Officer	FSM ACSE Team Member	Team Leader for the Water tank project

3. Plan of Operations

3.1 Actual work implementation plan.

*Table 6. **Presents the timeframe in which project undertook key activities between** July 2017 to April 2020.*

REVISED TIMELINE PROJECT ENDS 30 APRIL 2020																		
PROJECT TITLE:	**Protecting Islands through Learning and Leading in Adaptation and Renewable Energy ,Education program (PILLAR-Ed) FA 81207079**																	
		2018	**2019**												**2020**			
Ref	**Outputs / Activities**	**Jan - Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**April**
a. Educational, Awareness and Visibility Activity on Sustainable Energy																		
	i. Development material	Ongoing																
	ii. Identification of events to educate/promote/raise awareness	Ongoing																
	iii. Educate/Promote/Raise awareness on Sustainable Energy	Ongoing																
b. Energy Efficiency (EE) retrofitting services for participating schools identified																		
	i. Criteria to select participating schools developed and endorsed by the PSC	Completed																
	ii. 4 schools selected	Completed																
	iii. Energy audit consultancy ToR developed	Completed																
	iv. Recruit Consultant to conduct energy audits- professional fees and travels	Completed																
	v. Purchase energy audit equipment	Completed																
	vi. Energy audit training /workshops at each state - catering costs, venue hire and stationeries	Completed																
	vii. Energy audit conducted and report finalized	Completed																

	viii. Energy efficiency retrofitting works tendered	completed																	
	ix. Supply and installation of energy efficient technologies	completed		sign contract		supply equipment				installation									
	x. Monitor and report the energy efficiency impacts	Ongoing								data collection									
c.	**Energy Efficiency (EE) retrofitting at the FSM national government offices in Palikir**																		
	i. Prepare tender documents for energy efficiency retrofitting works at the FSM national government	Completed																	
	ii. Call for tender - advertising	Completed																	
	iii. Successful bidder identified and contract signed - evaluation committee refreshments	Completed																	
	iv. Contracting local installer for retrofitting																		
	v. Carry out EE retrofitting works at the FSM national government buildings in Palikir - contract award	completed			sign contract		Retrrofit completed												
	vi. Remaining LED lights (1804) to hand over to FSM Government to retrofit at other buildings	Ongoing								compile assets register and inspection reports									
	vii. Monitor and report impacts	Ongoing																	
d.	**Climate Change Adoptation (CCA) services for participating schools identified**																		
	i. Criteria to select participating schools /communities developed and endorsed by the PSC	Completed																	
	ii. 4 schools /communities selected (one from each FSM state)	Completed																	

	iii. Retrofitting measures identified to improve rainwater harvesting and storage at participating schools	Completed																	
	iv. Equipment and materials specifications finalized and tender(s) advertised - advertisement costs	completed																	
	v. Procurement Unit finalising RFQ																		
	vi. Disseminate and contract sign																		
	vii. Supply, transport and installation of equipment and materials	Completed								initiated delivery and final delivery in November									
	viii. Supply of water tanks to Chuuk State																		
	ix. Inspection of Supply and Handover to Chuuk State	Ongoing																	
	x. Installation of water tanks by Chuuk DOE	Ongoing																	
	xi. Monitor and report performance	Ongoing																	
e.	**Monitoring and Evaluation (M&E)**																		
	i. Development of a TOR for monitoring and evaluation	ongoing																	
	ii. Impact survey conducted	Ongoing												data collection					
	iii. Analyze survey results and report	Ongoing																	
	v. Travels for monitoring	Ongoing																	
	vi. Finalize M&E reports	Ongoing																	
f.	**Project Steering Committee (PSC)**																		
	i. Convene 3 PSC committee meetings - venue hire, refreshments and stationeries - will be held with the FSM ACSE (energy)	2 Completed, 2 remaining (December 2019, March 2020)																	

	ii. Organize travels for the PSC meetings																	
	iii. Capture meeting discussions, decisions and action items and, finalize meeting minutes	Technical reports and Financial reports (2 more Reports including final report)																
g.	**Project Management Unit**																	
	i. Recruit a Project Officer to be based at the NPRO	Completed																
	ii. Office supplies for Project Officer, Project Manager and ICC	Ongoing																
	iii. Travels for FSM ACSE staff (ICC, PM & PO)	Ongoing																
	iv. Cost sharing of Finance Officer at SPC EDD (with FSM ACSE Energy)	Ongoing																
	Final Financial Report & Audit initiation	Ongoing																
	v. Cost sharing of PM with FSM ACSE (Energy)	Ongoing																
	vi. Communications	Ongoing																

4. Results Oriented Monitoring

4.1 Summary of Results

In the second half of the year 2016, the project has achieved the following deliverables:

i. PDD Financial agreements signed by GIZ and SPC
ii. Project Steering Committee (PSC) established during the formulation of the concepts and Project Design Documents (PDD)
iii. Drafted Job Description (JD) for Project Officer

In the first half of the year 2017, the project has achieved the following deliverables:

i. Frist tranche of EUR40,000 received by SPC
ii. In Inception and project steering committee meeting has been schedule for the week of 12 June 2017 in Pohnpei
iii. The JD for the Project Officer job sized by SPC HR and ready to advertise
iv. FSM Congress formally approved the implementation of the ACSE in May 2017.
v. TOR for Energy Audit for Kosrae Schools developed
vi. A procurement plan for PDD6 developed
vii. The In-country Coordinator identified with contractual arrangements finalised with GIZ.

In the second half of the year 2017, the project has achieved the following deliverables:

i. Job description for Finance Assistance done and will be housed at SPC Economic Development Division in Suva, Fiji. The position co-shared with Tuvalu
ii. TOR for Gender Analysis of the FSM ACSE project developed
iii. FSM ACSE Communication Strategy compiled.
iv. 1st year Work Plan developed

In the first half of the year 2018, the project has achieved the following deliverables:

<u>Energy Efficiency (EE) retrofitting services for participating schools identified – Kosrae State</u>

i. Selection of schools for the preliminary energy audit and the detailed energy audit (in consultation with FSM Department of Education DoE) based on the demand of electricity (consumption statistics previous years) and the range of activities undertaken at the schools.
ii. Signed a Contract with Northmore Pte Ltd to conduct the preliminary energy audit in four selected schools in Kosrae. A draft Addendum to the contract to extend the timeline to September to allow the consultant to submit the required reports.
iii. Consultant submitted list of appropriate energy auditing tools for energy audits in public facilities to improve energy efficiency.
iv. Conducted preliminary energy audit in four selected schools in Kosrae: Lelu Elementary School, Tafunsak Elementary School, Malem Elementary School and Kosrae High School. Training on energy saving measures and energy auditing for representatives of the educational sector (school principals and representatives of DOE Chuuk) and maintenance staff (schools and utility Kosrae). Mission report and participants list.
v. Consultant conducted a detailed energy audit: Kosrae High School (KHS) selected for the detailed energy audit as it has the highest energy consumption– See document on the KHS detailed audit report and is yet to be finalised by the Consultant.

<u>Energy efficiency (EE) retrofitting at the FSM national government offices in Palikir</u>

vi. Inspection report of delivered retrofitting equipment completed in June 2018
vii. Consultation with FSM Department of Transportation, Communications and Infrastructure (TC&I) regarding the installation of new equipment
viii. The work on the Installation of new energy efficiency equipment started by two staff of TC&I.

Climate change adaptation (CCA) services for participating schools identified

ix. Discussion/Presentation with the Department of Education Chuuk State and Project Management Office Chuuk State regarding the collection of baseline information to select the schools with highest demand in Chuuk.
x. Baseline information data on school water needs and assessments.
xi. Assessment and selection of schools and of new water storage based on gathered baseline information and recommendations of WHO for emergency situations and locations on remote pacific islands.
xii. Consultation with IOM (International Organization of Migration) and UNICEF and SPC Water Programme regarding latest projects and specific experience in the installation of water catchments and storage facilities in Chuuk State is ongoing and considered in the final water tanks assessment
xiii. Development of required material list for RFQ was still ongoing – missing data will be collected by DoE Chuuk in the field trip in late July 2018
xiv. Development of necessary actions to implement water tanks installation, awareness on efficient use of water is still on going.

Project Steering Committee Meeting

There is no Project Steering Committee Meeting in first half of 2018.

In the second half of the year 2018, the project has achieved the following deliverables:

EE retrofitting services for participating schools identified

i. Amendment to Contract for Northmore to complete the Energy Audits reports.
ii. Audit Report submitted to SPC.
iii. FSM ACSE Team presented audit report and recommendations to Kosrae Energy Work Group and Kosrae DOE representatives.
iv. Conducted a Walk in Audit of the school buildings not covered in the Energy audit report
v. Drafted the RFP for supply of EE appliances based on the Energy Audit report.
vi. LOA for EE activity in Kosrae drafted and signed by all parties.

Energy efficiency (EE) retrofitting at the FSM national government offices in Palikir

vii. Not all EE equipment were retrofitted in July 2018. From May to December; 19 ACs and 216 LED lights were fitted.
viii. The PSC meeting proposed that the work on the retrofit to be contracted outs so the work is completed prior to project ended.

Climate change adaption (CCA) services for participating schools identified

ix. Water tanks Technical Assessment of schools completed.
x. Meeting with Chuuk DOE on selected schools and implementation plans.

xi. Water tank basements technical design drafted.
xii. LOA between SPC, Department of Resources and Development and DOE Chuuk for water tank installation drafted.

Project Steering Committee

xiii. Project Steering Committee Meeting held in August 2018.
xiv. Extension of project timelines with no associated costs approved by GIZ for project extension to 30 September 2019.

In the first half of the year 2019, the project has achieved the following deliverables;

EE retrofitting services for participating schools identified

i. The Request for Proposal (RFP) for the Supply of Energy Efficiency appliances for Kosrae schools send out in November 2018 and evaluation conducted in January 2019.
ii. Supply Contract with South Austral for the supply of EE appliances for Kosrae Schools (CS 19/077) was signed on 11 March 2019 and first payment done.

Energy efficiency (EE) retrofitting at the FSM national government offices in Palikir

iii. Two service contracts for the retrofit of EE appliances at Palikir National Building processed to fast track the work on retrofit. Final payment to be made once all EE appliances are fitted. The contractors could not complete the work by 15 April 2019.
iv. Amendment to Contracts extended to 15 June 2019.

Climate change adaption (CCA) services for participating schools identified

v. Request for Proposal (RFP) for the Supply of Water tanks was distributed with closing of bids on 12 April 2019.
vi. Request for Quotations (RFQ) distributed for water tank basements and accessories
vii. No bids received on the first RFP for the supply of 24 water tanks
viii. The ACSE team members (Frank and Hubert) visited DOE Chuuk and discussed again the technical assessment and a revised water tank technical assessments done.
ix. Based on the discussions, the water tank capacity was reduced to 1500 gallons and this was approved by the DOE Chuuk, The recommended water tank capacity for the outer islands is 1500 gallon as this fits with the small outboard motors available on the islands to transfer tanks to the communities. In addition, the shipment of a 1500 gallon tanks is more feasible compared to 3000 and a 2000 gallon tanks.
x. Drafted the TOR for the Contract from Chuuk DOE to supervise the shipment and installation of water tanks basements and catchments and water tanks.
xi. Projects received competitive quotes from Fiji suppliers for the two set of materials but ACE Hardware provides a more cost effective price as freight is not included.

Project Steering Committee

xii. A Hand over of the Project was conducted between the Christoph Frenkel to the Project Team members. A Steering Committee meeting was also organised on 14 March 2019.

In the second half of the year 2019 the project has achieved the following:

EE retrofitting services for participating schools identified

i. The EE appliances for Kosrae Schools arrived in Kosrae State on August 5, 2019, Inspection was carried out by Silverina Pretrick, Assistant Project Officer.
ii. Installation work started in September till December 2019. The Kosrae DOE technicians identified the shortfall on the ACs capacity that all 24 ACs provided by the contractor were of 12KBTU capacity. The Contractor was to supply 6 x 24KBUT, 2 X 18 KBTU, 11X 12KBTU and 5 X 9 KBTU. The Project Manager visited the site and confirmed the shortfall. A report was provided to the supplier and that payment was made only for ACs of 12,000BTU. Additional ACs of the required sizes were purchased locally in Kosrae. Refer to Verification Report on the Supply of Energy Efficient Appliances.
iii. Installation of the appliances mainly ACs were completed for some schools and EU GIZ ACSE stickers were put on the ACs and lights already installed.
iv. Collection of electricity consumption data after the retrofit work done in December and will continue until March 2019 when opportunity to visit Kosrae for the PDD 7 work.

<u>Energy efficiency (EE) retrofitting at the FSM national government offices in Palikir</u>

v. Asset Register completed.

<u>Climate change adaption (CCA) services for participating schools identified</u>

vi. ACE Hardware was the preferred supplier for the Water tanks and accessories. PO for the supply of Water tanks and Accessories developed.
vii. The Chuuk DOE maintenance leader, Mr Ioshimi Toreph travelled to Pohnpei to verify the materials and also to assist to organise and transport of the Water tanks and materials to the Mortlocks Island Schools in Chuuk. TOR developed and approved by both SPC and Chuuk DOE.
viii. The transportation of these materials was a very challenging task as there is no schedule of national boat to the Mortlock islands. In November 2019, two boats were approached to provide quotation. In addition to the quotation, the amount of materials to be shipped was considered. The BMA boat could not deliver the 24 water tanks in one trip and there is only option for two schedules. ACE company was also approached to provide a quotation and the boat was big enough to take all water tanks and all accessories in one trip. SPC office with the support of the Director and Team Leader of our GEP provided assistance through the compliance of the Procurement Policy. The Adam Brothers boat was offered the contract and to be charted to take the materials to the outer island schools.
ix. Delivery of the water tanks was done on by DOE Maintenance Supervisor, Mr Ioshimi Toreph. Final report on the Delivery of the Water tanks completed and submitted.

<u>Project Steering Committee</u>

x. A Steering Committee was conducted in December 2019.

In the period 1st January – 30th April 2020 the project has achieved the following.

<u>EE retrofitting services for participating schools identified</u>

i. Kosrae State visited in early March 2020; inspection of EE appliances retrofit conducted
ii. A service contract for the DOE Technicians to complete the work was approved and signed. The contract allowed the work to progress and complete before April 2020, end date of the project.
iii. Installation work completed
iv. Final Installation Report submitted, and payment done.

Energy efficiency (EE) retrofitting at the FSM national government offices in Palikir

iv. With remaining funds available, 54 additional energy efficiency ACs procured through the RFQ.
v. Additional EE ACs delivered to the Ministry of Finance Storage room and final payment.
vi. R&D laptop and tablet purchased for the Department of Resources and Development.
vii. Final Asset Register Handover completed and discussed with focal point at R&D.
viii. The impact Study to be conducted by GEP team. The latest electricity data (September 2019 to February 2020) was only obtained by the TC& I on 27 March 2020.
ix. Frank from SPC will compare the electricity bills after the retrofit work to the historical data (before the retrofits).

Climate change adaption (CCA) services for participating schools identified

ix. The communities started the construction of water tanks in the Lower Mortlocks schools
x. The project team reached out to the DECEM on inspection of the water tanks
xi. Discussions by phones with Chuuk DOE on progress of water tanks installation
xii. the installation work done by the school communities completed in five schools
xiii. The need for physical inspection of the water tanks and handed over of the project was cancelled due to COVID-19.
xiv. GIZ Suva office advises that the project can rely on the Chuuk DOE report as there is no option to travel to Chuuk
xv. Chuuk DOE submitted Inspection/Validation report on the Installation of water tanks in selected schools.

4.2 Monitoring and Evaluation Plan

Table 7.Results against monitoring and evaluation plan

Description	Indicator	Baseline	Target	Achievement	Validation
Objectives Increase resilience of communities to climate change impacts and contribute to sustainable development by increasing awareness and use of sustainable energy options	Improved resilience of participating communities and schools to CC impacts	No ACSE intervention in these communities and schools	8 communities/schools and FSM national governments participating in CC adaptation and SE measures	Increase resilience to climate change impacts (drought) in the Chuuk lower Mortlocks 6 schools supplied with additional 24 x 1500 gallons water tanks SE measures included EE retrofits at the National Palikir building (30 ACs, 40 High Bay LED Luminaires, 1170 LED T8 tube lights) Participation in SE by 5 schools (Kosrae High School, Tafunsak Elementary School, Lelu Elementary school, Utwe Elementary School and Sansrik Elementary School) and 1 Government Building in Kosrae retrofitted with Energy efficient appliances (LED lights LED lamps and energy efficient ACs)	181120 FSM 6 Water tanks Capacity Assessment in the Mortlocks – Chuuk State 191201 FSM 6 Water tanks and accessories delivery report _DOE Chuuk 200702 FSM 6 Inspection Report _ Water tanks installation_ Lower Mortlock Chuuk 190608 FSM6 Palikir Govt Building Installation Report 200415 FSM 6 Installation Report _EE appliances retrofit Kosrae schools
Outcome A Increased community knowledge on climate change	Informed communities on SE options and CC adaptation measures	Minimum information on SE and CC adaptation available to communities	Participating communities and general public are well informed about CC adaptation and SE options	Energy Audit training undertaken in 2018 targeting participating communities only	180525 FSM6 Energy Audit-Hands-on Training Report

Description	Indicator	Baseline	Target	Achievement	Validation
adaptation and sustainable energy	Number of community members are more aware of climate change adaptation and sustainable energy	Community members are more aware of climate change adaptation and sustainable energy	Community members are more aware of climate change adaptation and sustainable energy	Awareness activities were not undertaken but booklet developed on Energy Efficiency Handbook for Schools and Communities (distribute to Kosrae DOE and TC&I)	200430 FSM6 Energy Efficiency Handbook for Schools and Communities Draft V3.
Output A Educational and awareness materials on sustainable energy options and climate change adaptation measures developed, published and disseminated to participating communities	Developed: 8 pull up banners; 1 conference banner (6mx1m); brochures 1 A4-3 folds and A3-3 folds; 2 posters; 2 flyers (1-sided); 2 promotional stickers; 8 bill boards; 4 newsletters; 8 media releases	Selected communities don't have access to such education and awareness materials on sustainable energy options and climate change adaptation measures	7000 printed information in the form of leaflets, brochures, newsletters, etc in English and local languages	Not achieved from ACSE but achieved through the sister programme – CCPIR ACSE maintained PPT that could be used for future awareness raising on energy efficiency Not achieved from ACSE but achieved through the sister programme – CCPIR	180522 FSM6 Air Conditioning _PPT 180522 FSM6 Energy Auditing_ PPT 180522 FSM6 Energy Management_PPT 180522 FSM6 Lighting _PPT
	Number of curriculums contains CCA & SE	Number of curriculums contains CCA & SE	Number of curriculums contains CCA & SE		200430 FSM6 Energy Efficiency Handbook for Schools and Communities Draft V3.
	Number of materials printed	No new materials	7000 materials printed	No printing of materials	
	Number of products produced	0 new materials	9	Energy Efficiency Handbook for Schools and Communities booklet drafted.	
	Number of materials translated	No new materials	All materials translated	Not achieved but the curriculum content has been translated (with sister programme- CCPIR)	
Outcome B Increased use of sustainable energy	4 schools undergoing energy Audits and energy	No energy audits and no EE retrofitting	Practical demonstration of SE	4 schools were Audited with 2 additional schools assessed by the project management team. Only 5	181115 FSM 6 Kosrae Schools energy Audit Final Report

Description	Indicator	Baseline	Target	Achievement	Validation
measures, where feasible, in schools in the FSM	efficiency retrofitting		and options such as EE in selected schools	retrofitted as one school was to be renovated. Training on Basic energy auditing undertaken of which 11 teachers and employees from Kosrae DOE participated. 5 schools have 100% energy efficiency lighting	180525 FSM6 Energy Audit-Hands-on Training Report 200415 FSM6 Installation Report – Energy Efficiency Kosrae School
	Number of energy efficiency measures integrated to schools	0 Number of energy efficiency measures integrated to schools	4 schools with 100% energy efficiency lighting		
Output B Installation of sustainable energy measures in selected schools across the FSM	4 energy audits conducted in 4 schools; EE retrofitting completed in 4 schools; at least 10% reduction in electricity bills	No energy audits conducted and no EE retrofitting in participating schools	4 energy audits conducted and 4 schools with EE retrofitting works completed with 10% energy saving	4 schools conducted energy audits – 3 Preliminary Energy Audits and 1 School a Detailed Energy Audit	181115 FSM 6 Kosrae Schools energy Audit Final Report
	Number of schools upgraded from inefficiency to efficiency inverter	Number of schools upgraded from inefficiency to efficiency inverter	4 schools upgraded from inefficiency to efficiency inverter	4 schools and 1 office (DOE) upgraded from inefficiency to efficient inverter	200415 FSM6 Installation Report – Energy Efficiency Kosrae Schools
	Number of energy audits completed	0 Number of energy audits completed	6 schools energy audits completed	4 schools audited	
	Number of schools retrofitted	0 Number of schools retrofitted	5 schools retrofitted	5 schools and 1 Government building retrofitted	
Outcome C Increased use of sustainable energy measures at FSM national	All FSM national governments building in Palikir retrofitted with energy efficient measures	Energy audit conducted but no EE retrofitting	Demonstrated SE measures in governments buildings for future replications in other premises	SE measures included EE retrofits at the National Palikir building: 30 Energy efficient ACs, 40 High Bay LED Luminaires, 1170 LED T8tube lights)	190608 FSM6 - Palikir Govt Building Installation Report

Description	Indicator	Baseline	Target	Achievement	Validation
government building	% of led tube lighting in 1 target campus	Some level of led tube lighting in 1 target campus	100% led tube lighting in 1 target campus		190608 FSM6 - Palikir Govt Building Installation Report
Output C Installation of sustainable energy measures in the FSM national government buildings in Palikir	EE retrofitting completed in FSM national government buildings in Palikir; 10% reduction in electricity bills	Only energy audit conducted; no EE retrofitting in FSM national government premises	EE retrofitting works completed with 10% energy savings	National Complex retrofitted. Impact assessment currently being undertaken to assess the 10% savings.	190608 FSM6 - Palikir Govt Building Installation Report
	Number of SE measures installed in the FSM national government buildings in Palikir	Number of SE measures installed in the FSM national government buildings in Palikir	Number of SE measures installed in the FSM national government buildings in Palikir	• 30 inverter type AC units installed. • 36 high bay LED luminaries installed at congress and supreme court • 1170 Tube lights installed	190608 FSM6 - Palikir Govt Building Installation Report Asset Register
Outcome D Increased adaptation measures related to potential climate change impacts (Water Infrastructures)	4 schools/ communities with climate change adaptation intervention results – access to water	Poor access to water at participating schools/communities	Accessible safe drinking water for communities	6 schools have increased water storage security days for drinking.	180615 FSM6 Wash in School Baseline Data Oneop ES 180615 FSM6 Wash in School Basline Data _Mortlocks HS 180615 FSM6 Wash in School Baseline Data Kuttu ES 180615 fsm 6 Wash in School Baseline Data Satowan ES 180615 FSM6 Wash in School Baseline Data Lekinioch ES and Nomowonemu Jr

Description	Indicator	Baseline	Target	Achievement	Validation
					180615 FSM6 Wash in School Baseline Data Ettal ES
	Number of schools with enhanced infrastructures and governance	Some form of infrastructures and governance in place	4 schools' infrastructures and governance enhanced	6 schools have improved water infrastructure with 24 water tanks with bases and water cutters improvements	180724 FSM6 Selection of Schools _ Water tanks PPT 181120 FSM6 Water tanks Capacity Assessment in the Mortlocks_ Chuuk State 191120 TOR Water tanks and Accessories Delivery Report _ Chuuk DOE 200702 FSM6 Inspection Report _Water tanks Installation_ Lower Mortlock Schools _ Chuuk
Output D Climate change adaptation intervention such as rainwater harvesting and storage systems improvement in schools /communities across the FSM	4 schools /communities with improved rainwater harvesting and storage systems	No water systems in participating schools /communities	Access to safe drinking water improved in 4 schools /communities	Water storage reserve for safe drinking of 3 GALLON PER CHILD increased from average of 22 to 39 days.	190125 FSM6 -Water Tank Capacity Assessment_ Mortlocks
	Number of schools with improved access to safe drinking water	No water systems in participating schools /communities	4 schools /communities with improved rainwater harvesting and storage systems	6 schools have increased days of water storage.	200702 FSM6 Inspection Report _Water tanks Installation_ Lower Mortlock Schools _ Chuuk

4.4 Summary of Project Outputs, Visibility and Validation Products

The table below lists all project outputs including Annex 7 technical reports and validation products to the monitoring and evaluation plan, workshop reports of all kinds, policies, plans, manuals, guidelines, project mid-term and final reports, consultancy reports, construction reports. These are presented in chronological order

Table 8: Project Outputs and Validation Products

Outputs and Validation Products	M&E Validation	Comms Output	Project/Technical Outputs
141209_FSM_Concept Note_FSM6	●		
150119_FSM_Concept Note Evaluation-FSM6	●		
150422_EU-GIZ ACSE_FSM-MoU	●		
161207_EU-GIZ ACSE_FSM6-FA-Eng-81207079	●		
161207_EU-GIZ ACSE_FSM6-FA-Ger-81207079	●		
161207_EU-GIZ ACSE_FSM6-SA-81207079	●		
161207_EU-GIZ ACSE_PDD-FSM06-81207079	●		
160630 FSM6 UNDP Energy Audit	●		●
170213 FSM6&FSM7 Project Technical Report 1	●		●
180101 FSM6 -Kosrae Schools Energy Audit_TOR	●		·●
171114 FSM7&FSM7 ACSE PSC Meeting Minutes	●		
180123 FSM School Energy Audit_ RFQ Evaluation Report	●		
180312 FSM6 Schools Energy Audit Contract_Northmore Gordon Ltd	●		●
180522 FSM6 Air Conditioning_PPT	●	●	
180522 FSM6 Energy Auditing _ PPT	●	●	
180522 FSM6 Energy Management_PPT	●	●	
180522 FSM6 Lighting _PPT	●	●	
180615 FMS6_Wash in School-Baseline Data_Ettal ES	●		●
180615 FMS6_Wash in School-Baseline Data_Kuttu ES	●		●
180615 FMS6_Wash in School-Baseline Data_Lekinioch ES and Nomwonemu Jr	●		●
180615 FMS6_Wash in School-Baseline Data_Moch Community School	●		●
180615 FMS6_Wash in School-Baseline Data_Mortlocks HS	●		●
180615 FMS6_Wash in School-Baseline Data_Oneop ES	●		●
180615 FMS6_Wash in School-Baseline Data_Satowan ES	●		●
180724 FSM6 Selection of schools_Water Tanks_PPT	●		●
180801 FSM6 Project Technical Report 2	●		●
180829 FSM6&FSM7 - PSC Meeting Minute	●		
180901 FSM6 Project Technical Report 3	●		●

181008 FSM6 Request Letter of Extension_30 Sept. 2019_SPC	●		
181115 FSM6 _Kosrae Schools Energy Audit Final Report	●		
181120 FSM6 Gender Analysis	●		●
181129 FSM6 Supply of EE Appliances _ Kosrae Schools _RFP			●
189531 FSM6 Kosrae Energy Auditing Hands-on Training Report	●		●
190125 FSM6 -Water Tank Capacity Assessment_ Mortlocks	●		●
190131 FSM6 Supply of EE Appliances _Kosrae Schools _RFP Evaluation Report	●		●
190207 FSM6_Water tank Basements_RFP_SPC			●
190314 FSM6&FSM7 - PSC Meeting Minute	●		
190415 FSM6_Supply and Delivery _Rainwater Tanks & Materials_Appurtenances_RFP_SPC	●		●
190603 FSM6 Project Technical Report 4			●
190608 FSM6 - Palikir Govt Building Installation Report	●		●
190731 FSM6 - Request Letter of Extension _31 Dec. 2019_SPC	●		
190630 FSM6 Technical Report 5	●		●
191204 FSM6 -Request Letter of Extension_SPC_30 Apr. 2020_SPC	●		●
191601 FSM6 Kosrae Schools Retrofitting _LOA_SPC_ FSM R&D _ Kosrae DOE	●		●
200221 FSM6_ FA 81207079_Addendum 3	●		
200520 FSM6 Technical Report No. 6	●		●
181112 FSM6_ FA 81207079_Addendum 1	●		
191029 FSM6_ FA 81207079_Addendum 2	●		
200430 FSM6 Energy Efficiency Handbook – Schools and Communities Draft V3	●	●	
200415 FSM6 Installation Report – Energy Kosrae Schools	●		●
200702 FSM6 Inspection Report _Water tanks Installation_ Lower Mortlock Schools _ Chuuk	●		●
181120 FSM6 Water tank capacity assessment in the Mortlocks	●		●
XXXXXX FSM6 UNICEF Water Governance Report –	●		●
200520 FSM6 Final Project Report	●		●
200520 FSM6 Final Evaluation Report	●		●

4.3 Contribution to ACSE Programme Indicators

Table 9 summarises the contributions of the project to the ACSE Programme Level Indicators. The related validation products are also listed and are included, chronologically, in the list of Annexes.

	Intervention logic	**Objectively verifiable indicators of achievement**	**Indicator Definition or Remarks**	**Target**	**Result**	**Validation**
General objective	Enhance sustainable livelihoods in Pacific ACP countries (PACPs)	• All PACP countries have improved on their MDGs / Sustainable Development Goals	Yes – improved. Refer to SDGs table.	NA to project reporting	NA to project reporting	NA to project reporting
Programme purpose	To strengthen the PACPs' capacity to adapt to the adverse effects of climate change and to enhance their energy security at national, provincial and local/community level, addressing the different impact on men and women	• Number of interventions successfully implemented at national, provincial and local/community level	'Successfully implemented' means that the Intervention has been put in place and validated through appropriate documentation. 1. Governance instruments 2. Water infrastructures 3. Livelihood infrastructures Climate-proofing infrastructures 4. FAESP - Administrative Systems 5. FAESP - Legislative instruments 6. Coordination/Cooperation interventions	NA to project reporting	NA to project reporting	NA to project reporting

			7. Gender Balance interventions			
		Increased availability of regional and national technical support (RTSM	'Increased availability' means there are more technical personnel are registered with RTSM	NA to project level reporting	NA to project reporting	NA to project reporting
		Proportion of women and men in climate change decision-making bodies	Not clear	NA to project level reporting	NA to project reporting	NA to project reporting
		Number of interventions which promote the involvement of women in climate change adaptation / sustainable energy management processes	'Promoting involvement of women' means measurable actions taken in a project. These may include gender assessment/study and analysis, or workshops/trainings, or establishment of a body with fair participation and or carrying out relevant event.	4	Water infrastructure baseline assessments at 7 schools (of the Mortlock region) included the gender element. Oneop Elementary School (ES), Mortlock ES, Kuttu ES, Satowan ES, Lekinoch ES and Nomwonemu Jr	180615 FSM 6 _Wash in School Baseline Data _Oneop ES 180615 FSM 6 _Wash in School Baseline Data _Mortlock ES 180615 FSM 6 _Wash in School Baseline Data _Kuttu ES 180615 FSM 6 _Wash in School Baseline Data _Satowan ES 180615 FSM 6 _Wash in School Baseline Data _Lekinoch ES and Nomwonemu Jr 180615 FSM 6 _Wash in School Baseline Data _MOch Community Hight

						180615 FSM 6 _Wash in School Baseline Data _Ettal ES 181120 FSM 6 Water Tank Capacity & Design Assessment in the Mortlocks Chuuk State 181120 FSM6& FSM7 Gender Analysis
Expected results	**Result 1**: Enabling environment and communities' adaptive capacity to cope with climate change challenges, including gender specific challenges, are enhanced	• At least one CCA project in at least eight PACP implemented by end of 2018	'Implemented' means all on groundwork completed.		Financial Agreement extended to August 2020.	161207_EU-GIZ ACSE_FSM6-FA-Eng-81207079 161207_EU-GIZ ACSE_FSM6-FA-Ger-81207079 161207_EU-GIZ ACSE_FSM6-SA-81207079 161207_EU-GIZ ACSE_PDD-FSM06-81207079 181112 FSM6_ FA 81207079_Addendum 1 191029 FSM6_ FA 81207079_Addendum 2 201202 FSM6_ FA 81207079_Addendum 3
		At least 75% of national implementation partners on the regional EU-GIZ ACSE steering committee agree that	'Capacity' means the ability of people, organisations and societies to manage their own sustainable development processes and	NA at project level reporting	NA at project level reporting	NA at project level reporting

		adaptive capacity has been enhanced	adapt to climate change. This includes recognising obstacles to development, designing strategies to tackle them, and then successfully implementing these. Multilevel approach: Individual competence e.g. trainings, workshops, mentoring Organisational development e.g. policies, plans, establishments of new work unit - REGIONAL, NATIONAL, PROVINCIAL AND VILLAGE LEVEL Development of cooperation and partnerships e.g. commission, bilateral partnership through formal partnership with MoU - ALL LEVEL Development of enabling frameworks e.g. legislations - National Level			
		Number of (new or reviewed) national, provincial and local policies, strategies, plans integrating CCA *	'New or reviewed' products 'integrating CCA' means only relevant pre approved products produced by the projects	NA at project level reporting	NA at project level reporting	NA at project level reporting

		Number of improved water infrastructures linked to the mitigation of and/or adaptation to climate change*	Only infrastructures improved through the projects. 'Intervention' is the establishment of functioning system of the infrastructure. 'Improved' means capacity of supply increased, security of supply enhanced, sustainability of management improved, robustness of design, and sustainability of supply. The result of the improved infrastructure is enhanced adaptation to climate change	4	Plan was to boost infrastructure at 7 schools in the Mortlock region. However only 6 schools included in the improvement work and supply of 24 x 1,500 gallons water tanks and accessories. The 6 schools with number of tanks: Ettal ES (1), Moch (6), Oneop (1), Lekinoich & Nomwenomu (9), Mortlock High School (5), Kuttu (2) . Satowan school was part of the initial assessments but was excluded in the supply of water tanks due to damaged truss and rafters which were not suitable for rainwater catchment and needed extensive renovation.	181120 Water Tank Capacity & Design Assessment 191201 FSM6 Water tanks and Accessories Delivery Report _ Chuuk DOE 200702 FSM6 Inspection Report _Water tanks Installation_ Lower Mortlock Schools _ Chuuk
		Number of improved food production systems linked to the mitigation of and/or adaptation to climate change	'Improved food production system' means capacity of food production supply increased, security of food production supply enhanced, sustainability of food production management improved, robustness of food product system design, sustainability of food production systems supplies. The result of the	NA	NA at project level reporting	NA at project level reporting

			improved infrastructure is enhanced adaptation to climate change			
		Number of climate-proofed infrastructures linked to the mitigation of and/or adaptation to climate change	'Climate- proofed infrastructures' examples are: - Cyclone proofed e.g. Vanuatu. - Australian standard design for cyclone rating for water and solar infrastructures design and house design; - Longevity of system (durability) in harsh environment e.g. Kiribati. - Seawall and coastal barrier design to withstand sea level rise and storm surge e.g. Tonga	NA	The Chuuk DOE were much aware of water tanks infrastructures that are prone to cyclones and engaged in the discussions on the procurement and inspections of the water tanks and accessories. With the limited supply of water tanks accessories such as the leaf eater, it was impossible to build the water tank infrastructures according to international standards.	190521 FSM6 Chuuk Trip Report May 2019_ FV
		Number of households and communities benefiting from CCA projects* Households	Benefiting means 'directly benefiting from the impact of the project. Examples: Communities and households impacted by water systems, solar systems, food production systems, sea wall.		594 students in the 6 schools are benefitting (276 males, 318 females schools and communities benefitting from increased water security days. The water tanks were placed at the schools so the targeted communities can	181120 Water Tank Capacity & Design Assessment 200702 FSM6 Inspection Report _Water tanks Installation_ Lower Mortlock Schools _ Chuuk
		Communities		4		

					have access during water shortages. The water tanks are accessible to the students and their families.	
		Number of interventions successfully replicated at national, provincial and local/community level*	Replication as flagged in the PDD. "Intervention replicated' means replicating existing or past intervention before the project (can be an improved replica) at national, provincial and local/community level. E.g. CK1.		Replication of water tanks in Mortlock to improve water security, the project works with the SPC – RENI project to procure water tanks using the RENI project preferred supplier and compliance with SPC procurement policy. The logistics in regards to the delivery and installations of water tanks were replicated using past water tank installations in Chuuk such by DECCEM, IOM and UNICEF. New interventions are the EE appliances retrofits work in Kosrae and National Government building in Pohnpei.	200702 FSM6 Inspection Report _Water tanks Installation_ Lower Mortlock Schools _ Chuuk 190608 FSM6 - Palikir Govt Building Installation Report 200415 FSM6 Installation Report – Energy Efficiency Kosrae School Final
		Number of interventions which combine implementation and strengthening of systems for capacity building, planning, public finance management, mainstreaming and country-led	'Combine intervention' means intervention with multi-dimensional approach that includes 3 of the 5 components listed above. E.g. TO31 -JNAPP II	NA	NA	NA

		coordination* (only projects that have this as a high level outcome)				
		Number of interventions which enhance gender equality.* *Note: sex disaggregated data*	Validation - Gender Products 'Enhance gender equality' means where a project demonstrates an intervention at the activity level on the equality of roles for decision making. E.g. Establishment of gender-neutral decision-making body; Gender assessment influencing infrastructure, policy, plan and legislative design; Trainings/ Workshops/ Consultations	4	Water infrastructure baseline assessments at 7 schools (of the Mortlock region) included the gender element. 6 schools are Ettal Elementary School, Kuttu Elementary School, Lekinoch Elementary School, Moch Community School, Oneop Elementary School, Mortlocks High School, Satowan Elementary School	181120 Water Tank Capacity & Design Assessment 181120 FSM6 & FSM7 Gender Analysis 200702 FSM6 Inspection Report _Water tanks Installation_ Lower Mortlock Schools _ Chuuk
		Number of trainings and people trained in SE/CCA interventions Trainings	Number of trainings validated by training reports. Number of people trained recorded as by product of training.	4	1 training on energy audit conducted. There is no training on Water tanks installations	180525 FSM6_ Energy Audit Hands on Training Report 180522 energy Audit Participants List Kosrae 190521 FSM6 Chuuk Trip Report May 2019_ FV
		No. of people trained			Male – 10 Female - 1	
		Number of partnerships established between EU-GIZ ACSE and governments, development partners,	'Partnerships established' means formal partnership established validated by MoUs, or contracts	3	4	161207_EU-GIZ ACSE_FSM6-FA-Eng-81207079 190320 FSM6 Chuuk Schools _Water Tank Installation

		regional organisations, and the like.			Financial Agreement has been extended to August 2020.	_LOA_SPC_ FSM R&D _ Chuuk DOE 190116 LOA EU GIZ ACSE SPC FSM R&D Kosrae DOE
	Result 2: Cost-effectiveness and efficiency of energy systems are improved and dependence on fossil fuels is reduced	At least one SE project in at least seven PACP is implemented by end of 2018	'Implemented' means all on groundwork completed.	1	Energy Efficiency retrofits in Kosrae schools and DOE Conference Office. 6 schools conducted energy audits – 3 Preliminary Energy Audits and 1 School a Detailed Energy Audit and 2 schools Walk in Audits. Only 5 schools retrofitted with 100% energy efficiency lighting. 5 schools and 1 Conference Room at Department of Education upgraded from inefficiency to efficient AC inverters. Energy Efficiency retrofits in Pohnpei National Government building in Pohnpei replaces inefficient lights and ACs.	200415 FSM6 Installation Report – Energy Efficiency Kosrae School Final
		Number of solar infrastructures linked to the development of national renewable energy	'Solar infrastructures' refers to solar systems (hardware infrastructures). Solar infrastructures E.g. solar hybrid system or solar systems.		0 (No solar infrastructure from this project)	NA
		Extra Kilowatts		NA	NA	

		Number of biogas infrastructures linked to the development of national renewable energy	'Biogas infrastructures' refers to biogas systems (hardware infrastructures). Biogas infrastructures E.g. biogas system, biomass plant.	NA	NA	NA
		Number of institutional strengthening measures linked to the development of national renewable energy	'Institutional strengthening measures' refers to formal national legislative policy and planning processes and mechanisms.	NA	NA	NA
		FAESP 15 - Legislative instrument	(Definition & Contribution- Formal Law, Regulation, Policy, Plans.)			
		FAESP 14 - Administrative system (	Definition & Contribution - Measurable changes in the governance system. Validation - Report or Agreement showcasing changes)			
		FAESP 25 - Increase exposure to RE knowledge	(Definition & Contribution- Quantifiable formal engagement processes e.g. training/ workshops/structured community or technician consultations/ onsite and field assessment or survey.)		1	181115 FSM6 _Kosrae Schools Energy Audit Final Report 189531 FSM6 _Kosrae Energy Auditing Hands-on Training Report
		Number of households and communities directly benefiting from SE projects*	Examples - Directly benefitting e.g. communities and households directly receiving renewable energy		9 buildings at Palikir national building benefitted with retrofit work due to electricity bills reduced.	190608 FSM6 - Palikir Govt Building Installation Report

		Households	from the ramifications of enacted legislations, or national energy systems. Communities types - school community, social community as defined by govt.		5 schools benefitting from EE retrofit work with total no. of students is 1470, 742, males and 728 females. The projected total population of Kosrae in 2020 is 6,732[6]	200415 FSM6 Installation Report – Energy Efficiency Kosrae School 200817 FSM6 Asset external transfer SPC-FSM R&D PILLAR-ED
		Communities		4	5 schools with a total population of 1470 students and 153 staff, 83 males and 70 females	
		Number of interventions successfully replicated at national, provincial and local/community level*	Replication as flagged in the PDD. Replicating existing or past intervention before the project (can be an improved replica) at national, provincial and local/community level.	NA	NA	NA
		Number of institutions and people covered by respective interventions related to capacity building, planning, and institutional strengthening*	'Interventions related to capacity building, planning, and institutional strengthening measures' refers to formal national legislative policy and planning processes and mechanisms or development of formal training program for institutions.	NA	NA	NA

[6] website : fsmstatistics.fm/social/population-statistics/

		Number of interventions which enhance gender equality	Validation - Gender Products Definition: 'Enhance Gender Equality - Where a project demonstrates an intervention at the activity level on the equality of roles for decision making. Examples - Establishment of gender-neutral decision-making body; Gender assessment influencing infrastructure, policy, plan and legislative design; Trainings/ Workshops/ Consultations	Not applicable		181120 FSM6&FSM7 Gender Analysis
		Number of trainings and people trained in SE/CCA interventions ** Note: sex disaggregated data*		4	Only 1 Audit training carried out in Kosrae for all the 4 schools that underwent Detailed and Preliminary Audits	189531 FSM6 _Kosrae Energy Auditing Hands-on Training Report including participants list
		No. of people trained			Male – 10 Female - 1	
		Number of partnerships established between EU-GIZ ACSE and governments, development partners, regional organisations, and the like.	Formal partnership established validated by MoUs, or contracts.	7 partnership established	150422 EUGIZ ACSE MOU -FSM 181124 FSM 6 Energy Audits Contract Northmore 190116 LOA EU GIZ ACSE SPC FSM R&D Kosrae DOE	

					190314 FSM 6 Benster Contracts_ EE retrofit Palikir 190314 FSM Arington EE retrofit Palikir 200315 FSM 6_ EE Kosrae School Contract CPS 20-117 Lugo R Skilling	
	Result 3: Regional and national technical expertise in the field of CCA and SE is created and/or enhanced	Nucleus of pool of regional technical experts (Regional Technical Support Mechanism - RTSM) established and functional		NA	NA	NA

5. Visibility and Learning

5.1 Project Visibility

The table below summarises the key visibility products of the project NOT including the core publications themselves.

Table 10: Developed project visibility products in chronological order

Visibility Products	Timelines
Energy Audit Training Power Point Presentations	May 2018
EU-GIZ ACSE Logos Stickers -	August 2018
- 180806 FSM6 AC Stickers (6cm X 20 cm)	
- 180806 FSM6 Switch Stickers (2.5cm x 10 cm)	
EU-GIZ ACSE flash drives	November 2019
Energy Efficiency Handbook- Schools and Domestic Households	August 2020

5.2 Learning

The learning from the project is to be able to know other similar projects and request for information sharing mainly when it does with procurement of equipment's. This was the case in this project, where we justify the need to purchase the water tanks from a preferred supplier done by the RENI project. We already had sent an RFP where there was no response and learning that there was a preferred supplier, from another project, we had to seek approval from our Procurement Unit to use the same supplier.

The project took long to confirm the boat for delivery of the water tanks, while there are options for National Government boats to assist with the delivery of water tanks, the government boats have very busy schedules as it oversees the shipping needs of all 4 States, therefore costs of delivery of such materials should be costed in every projects. In this case, there was enough savings to cover costs of boat charter.

Learnt that most schools in Kosrae and probably in other States are well maintained and schools are paying high costs of electricity due to the number of lights that seen in classrooms. However, there is limited maintenance work on the school lights such as cleaning of outside covers and wiping of lamps etc.

Learnt that working with communities mainly in the outer islands to contribute to projects is still being practiced in Chuuk, where the school communities participated in the construction and have ownership of the project. This is a sensitive issue in these areas where projects do not change the people's way of thinking for instance to get paid every time a project is being implemented. This is different to other countries such as Kiribati where the communities are not contributing freely but requires to be paid. In Chuuk, communities do the installations and any repair and maintenance is done by the Department of Education.

There are a lot of stakeholders that could have engaged better in the delivery of the project, the Environment Unit but were not much involved due to limited interactions with the Resources and Development departments at the national level.

6. Annexes

The list of Annexes related to this report is provided in Table 11. These annexes will be submitted separately to this report due to their large size.

Table 11: List of Annexes

Annexes	Project Start Up and Management
1	141209_FSM_Concept Note_FSM6
2	150119_FSM_Concept Note Evaluation-FSM6
3	150422_EU-GIZ ACSE_FSM-MoU
4	161207_EU-GIZ ACSE_FSM6-FA-Eng-81207079
5	161207_EU-GIZ ACSE_FSM6-FA-Ger-81207079
6	161207_EU-GIZ ACSE_FSM6-SA-81207079
7	161207_EU-GIZ ACSE_PDD-FSM06-81207079
8	170517 FSM6 Congressional Resolution No. 20-12
	Project Results & Validation
1	160630 FSM6 UNDP Energy Audit
2	161230 FSM6&7 Technical Report No. 1 Q42016
3	170430 FSM6&FSM7 Final Technical Report No. 2
4	171114 FSM6&FSM7 ACSE PSC Meeting No. 1
5	180101 FSM6 -Kosrae Schools Energy Audit_TOR
6	180123 FSM6 School Energy Audit_ RFQ Evaluation Report
7	180312 FSM6 Schools Energy Audit Contract_Northmore Gordon Ltd
8	180430 FSM6 UNICEF Water Catchment Assessment Report_ Roof lengths (Schools in Mortlock
9	180430 FSM6 Harvesting and Storage facilities for schools in Chuuk_ Selection Scheme
10	180515 FSM6 Palikir Government Building EE Appliances Inspection Report
11	180522 Energy Audit Participants List Kosrae
12	180522 FSM6 Air Conditioning_PPT

13	180522 FSM6 Energy Auditing _ PPT
14	180522 FSM6 Energy Management Slides_PPT
15	180522 FSM6 Lighting Slides _PPT
16	180525 FSM6 Report on Energy Efficiency Training Sessions Kosrae State
17	180601 FSM6 Palikir National Government EE appliances Inspection Report
18	180615 FMS6_Wash in School-Baseline Data_Ettal ES
19	180615 FMS6_Wash in School-Baseline Data_Kuttu ES
20	180615 FMS6_Wash in School-Baseline Data_Lekinioch ES and Nomwonemu Jr
21	180615 FMS6_Wash in School-Baseline Data_Moch Community School
22	180615 FMS6_Wash in School-Baseline Data_Mortlocks HS
23	180615 FMS6_Wash in School-Baseline Data_Oneop ES
24	180615 FMS6_Wash in School-Baseline Data_Satowan ES
25	180701 FSM6&FSM7 Mission Report Water tanks + Net metering Chuuk
26	180724 FSM6 Selection of schools_Water Tanks_PPT
27	180806 FSM6 AC sticker (6cm x 20cm)
28	180806 FSM6 Switch Sticker (2.5cm x 10cm)
29	180806 FSM6 Technical Report No.3
30	180829 FSM6&FSM7 -EU GIZ ACSE PSC Meeting Minute No. 2
31	181008 FSM6 Request Letter of Extension_30 Sept. 2019_SPC
32	181112 FSM6 FA 81207079 Addendum 1
33	181115 FSM6 _Kosrae Schools Energy Audit Final Report
34	181120 FSM6 -Water Tank Capacity Assessment_ Mortlocks _ Chuuk State
35	181120 FSM6 Gender Analysis
36	181129 FSM6 RFP Supply of EE Appliances _ Kosrae Schools
37	181231 FSM6 Technical Report No. 4
38	190116 FSM6 LOA _ EU GIZ ACSE_SPC_FSM R&D _ Kosrae DOE
39	190131 FSM6 Technical Evaluation Report Kosrae Schools EE Appliances
40	190207 FSM6_Water tank Basements_RFP_SPC
41	190314 FSM6 Contract Arington EE retrofit Palikir
42	190314 FSM6 Contract Benster EE retrofit Palikir
43	190314 FSM6&FSM7 - PSC Meeting Minute No.3
44	190320 FSM6 LOA_SPC_FSM R&D_ Chuk DOE Water tank Installation
45	190415 FSM6_RFP Supply and Delivery _Rainwater Tanks & Materials_Appurtenances
46	190608 FSM6 - Palikir Govt Building Installation Report
47	190630 FSM6 Technical Report No. 5
48	190911 FSM6 Inspection Report _EE appliances retrofit Kosrae Schools

49	191120 FSM6 tor Water tanks and Accessories Delivery Report _Chuuk DOE
50	190731 FSM6 - Request Letter of Extension _31 Dec. 2019_SPC
51	191202 FSM6 _FA 81207079 _Addendum 3
52	191212 FSM6&FSM7 PSC Meeting Minutes No. 4
53	191204 FSM6 -Request Letter of Extension_SPC_30 Apr. 2020_SPC
54	200315 FSM6_ EE Kosrae School contract CPS 20-117 Lugo R Skilling
55	200415 FSM6 Installation Report _EE appliances retrofit Kosrae Schools
56	200430 FSM6 Energy Efficiency Guide for FSM Schools and Domestic Households
57	200520 FSM6 Technical Progress Report No.6
58	200618 FSM6 Palikir Government Building Additional AC unit Inspection Report
59	200621 FSM6 Final Project Evaluation Report
60	200630 FSM6 Inspection Report _Water tanks Installation_ Lower Mortlock Schools _ Chuuk
61	200520 FSM6 Final Evaluation Report
62	200520 FSM6 Final Project Report (this report)