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Securing Climate-Resilient Sustainable Land Management and Progress Towards Land Degradation Neutrality in the Federated States of Micronesia

Part I: Project Information

GEF ID
10858

Project Type
FSP

Type of Trust Fund
GET

CBIT/NGI
CBIT **No**
NGI **No**

Project Title
Securing Climate-Resilient Sustainable Land Management and Progress Towards Land Degradation Neutrality in the Federated States of Micronesia

Countries
Micronesia

Agency(ies)
UNDP

Other Executing Partner(s)
Department of Environment, Climate Change & Emergency Management

Executing Partner Type
Government

GEF Focal Area
Multi Focal Area

Taxonomy
Biodiversity, Focal Areas, Mainstreaming, Agriculture and agrobiodiversity, Infrastructure, Land Degradation, Food Security, Land Degradation Neutrality, Carbon stocks above or below ground, Land Productivity, Land Cover and Land cover change, Sustainable Land Management, Improved Soil and Water Management Techniques, Integrated and Cross-sectoral approach, Sustainable Agriculture, Restoration and Rehabilitation of Degraded Lands, Ecosystem Approach, Income Generating Activities, Sustainable Forest, Sustainable Livelihoods, Community-Based Natural Resource Management, Strengthen institutional capacity and decision-making, Influencing models, Convene multi-stakeholder alliances, Demonstrate innovative approache, Transform policy and regulatory environments, Private Sector, Stakeholders, SMEs, Beneficiaries, Indigenous Peoples, Communications, Awareness Raising, Behavior change, Public Campaigns, Education, Local Communities, Type of Engagement, Partnership, Participation, Consultation, Information Dissemination, Civil Society, Non-Governmental Organization, Community Based Organization, Gender Mainstreaming, Gender Equality, Sex-disaggregated indicators, Women groups, Gender-sensitive indicators, Gender results areas, Participation and leadership, Capacity Development, Access and control over natural resources, Knowledge Generation, Capacity, Knowledge and Research, Knowledge Exchange, Enabling Activities

Rio Markers
Climate Change Mitigation
Climate Change Mitigation 1

Climate Change Adaptation
Climate Change Adaptation 1

Duration
72 In Months

Agency Fee($)
489,749.00

Submission Date
9/13/2021

A. Indicative Focal/Non-Focal Area Elements

Programming Directions	Trust Fund	GEF Amount($)	Co-Fin Amount($)
LD-1-1	GET	3,725,848.00	23,952,628.00
LD-2-5	GET	931,462.00	5,988,985.00
BD-1-1	GET	497,945.00	3,201,638.00
	Total Project Cost ($)	**5,155,255.00**	**33,143,251.00**

B. Indicative Project description summary

Project Objective

To secure critical ecosystem services through climate-resilient sustainable land and coastal management contributing to Land Degradation Neutrality in the Federated States of Micronesia.

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount($)	Co-Fin Amount($)
1. Strengthening the strategic (institutional, policy, regulatory) framework for addressing land degradation	Technical Assistance	Strengthened inter-sectoral governance and strategies to mainstream SLM/BD and LDN *- innovative policies and plans for SLM through National Action Programme incorporating LDN targets, with state level plans to guide implementation* *- strengthened regulatory environment for SLM/BD and achieving LDN* *- enhanced implementation of land use and management plans to address land degradation* *- Improved cross sectoral collaboration to address land degradation at state and national levels including greater participation of women and the private sector* --Indicators, baselines, and targets to be confirmed during the PPG	1.1 National Action Programme (NAP) for combating land degradation prepared for adoption by Government, incorporating indicators, targets and priority actions for achieving Land Degradation Neutrality (LDN) across each State, with support for mainstreaming into priority policies. 1.2 Priority gaps and weaknesses in the regulatory framework and enforcement mechanisms for combatting land degradation identified, and improvements achieved through technical support and advocacy leading to adoption by state and national governments. 1.3 State level land use plans and local management plans on the high islands strengthened with enhanced implementation to avoid,	GET	638,270.00	3,469,758.00

reduce and reverse land degradation and conserve biodiversity.

1.4 Existing/nascent state level intersectoral working groups for landscape management fostered and operationalised to address land degradation, and national level intersectoral working group established and supported to oversee formulation and mainstreaming of the NAP, both with engagement of the private sector.

2. Enhancing information, decision support tools and capacity for addressing land degradation	Technical Assistance	Enhanced tools and government capacity for SLM and LDN *- LDN baseline and targets established with enhanced information available to states for mapping and monitoring LDN and SLM measures* *- At least 5 practical guidelines, protocols, and tools for SLM/BD in the agriculture and infrastructure sectors* *- 30% capacity increase for SLM/BD/LDN in the agriculture and infrastructure sectors for both women and men as measured by UNDP capacity development scorecard* --Indicators, baselines, and targets to be confirmed during the PPG	2.1 National level spatial mapping and strengthened baseline information available to states on existing platforms to assess trends, drivers and hotspots of land degradation, and targets set for the LDN sub-indicators 2.2 Resilience assessments of landscapes, habitats and land uses to land degradation and climate-induced risks to support planning and zoning 2.3 Protocols for monitoring land degradation and practical guidelines for promoting/ mainstreaming SLM/BD in the agriculture and infrastructure sectors 2.4 Capacity building for government officers, extension staff, community groups, NGOs etc.), plus technology transfer and equipment for LDN monitoring and mainstreaming of SLM/BD ensuring that training and extension programs are gender-focused and gender-responsive	GET	785,562.00	3,469,758.00
3. Embedding climate-smart sustainable land management in critical	Technical Assistance	Community participation in measures to reduce land degradation, sustain ecosystem services and biodiversity, improve livelihoods and wellbeing	3.1 Community-led participatory integrated landscape management and rehabilitation plans co-designed, agreed, and implemented to avoid, reduce,	GET	2,945,860.00	21,133,978.00

landscapes and coastal zones (demonstration activities)	*- Sustainable land management over 3,367 ha of 4 critical terrestrial and coastal landscapes, including land restoration over 985 ha and 842 ha under improved practices in production systems through approved community-led and implemented integrated management plans with an equal participation of women and men* *- At least 8 initiatives implemented to enhance ecosystem services and biodiversity and reverse land degradation from agriculture and infrastructure sectors through nature-based solutions, engaging both youth and an equal participation of women and men* *- reduced land degradation resulting from 335 smallholder farms (= 50% of households in the landscapes) adopting SLM techniques* *- 10% improvement in net household profitability (including female-headed households) from smallholder farms adopting SLM and related added value products / marketing / diversification initiatives* --	and reverse land degradation to protect ecosystem services and biodiversity 3.2 Targeted ecosystem rehabilitation (nature-based solutions) demonstrated in innovative partnerships with community and the private sector in degraded watersheds and coastal zones to reduce and reverse land degradation and enhance biodiversity. 3.3 Smallholder farmers on traditionally owned lands supported to implement traditional and innovative climate-smart agricultural practices for sustainable land management and climate change adaptation that contribute to LDN, protect ecosystem services, biodiversity, and food security, and enhance incomes

		Indicators, baselines, and targets to be confirmed during the PPG				
4. Effective knowledge management, gender mainstreaming, and M&E	Technical Assistance	4. Increased project impact, replication and upscaling through enhanced awareness and knowledge management *- At least 30% improvement in community awareness and attitudes towards sustainable land management and protecting ecosystem services and biodiversity as measured by KAP (Knowledge, Attitudes and Practices) survey* *- 1 on-line knowledge management platform for SLM/LDN operational* *- At least 5 project best practices and lessons on SLM/LDN (including on gender and youth mainstreaming and socio-cultural benefits) are accessed and applied throughout the FSM* *- At least 5 initiatives demonstrating active participation and knowledge exchange in regional and global SLM/LDN initiatives* --Indicators, baselines, and targets to be confirmed during the PPG	4.1 Awareness-raising programme on SLM and the benefits of tackling land degradation delivered through targeted communications, education, campaigns and community participation 4.2 Knowledge management platform and programme to share information and project lessons between states, landscapes and communities including through an on-line portal, learning exchanges and demonstration farms/farmer associations 4.3 Best practices and lessons learned for addressing land degradation exchanged through South-South cooperation with other SIDS across the Pacific and elsewhere to support LDN/SLM. 4.4 Project M&E, safeguards, and gender mainstreaming to support effective project management and maximize project impact	GET	540,075.00	3,469,757.00
				Sub Total ($)	**4,909,767.00**	**31,543,251.00**

Project Management Cost (PMC)

	GET	245,488.00	1,600,000.00
	Sub Total($)	**245,488.00**	**1,600,000.00**
	Total Project Cost($)	**5,155,255.00**	**33,143,251.00**

C. Indicative sources of Co-financing for the Project by name and by type

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount($)
Recipient Country Government	FSM Dept. of Environment, Climate Change & Emergency Management	In-kind	Recurrent expenditures	3,500,000.00
Recipient Country Government	FSM Dept. of Environment, Climate Change & Emergency Management	Public Investment	Investment mobilized	5,250,000.00
Recipient Country Government	FSM Department of Resources & Development	In-kind	Recurrent expenditures	4,400,000.00
Recipient Country Government	FSM Department of Resources & Development	Public Investment	Investment mobilized	7,000,000.00
Recipient Country Government	Chuuk State Government	In-kind	Recurrent expenditures	300,000.00
Recipient Country Government	Kosrae State Government	In-kind	Recurrent expenditures	2,000,000.00
Recipient Country Government	Pohnpei State Government	In-kind	Recurrent expenditures	1,750,000.00
Recipient Country Government	Yap State Government	In-kind	Recurrent expenditures	1,092,144.00
Civil Society Organization	Conservation Society of Pohnpei	In-kind	Recurrent expenditures	1,600,000.00
Civil Society Organization	Micronesia Conservation Trust	In-kind	Recurrent expenditures	4,000,000.00
GEF Agency	UNDP – Pacific Office	In-kind	Recurrent expenditures	2,251,107.00
			Total Project Cost($)	**33,143,251.00**

Describe how any "Investment Mobilized" was identified

Total co-financing for this project is US$33,143,251 (US$12,250,000 of mobilized investments and US$20,893,251 in recurrent expenditure), demonstrating FSM's strong commitment to the project objective. Co-financing type has been allocated in accordance with GEF co-financing policy, using conservative estimates and definitions at this early stage. Any budget that cannot be expected to be repeated annually into the future is considered as investment mobilized. Recurrent expenditures are those at past or budget-increment levels (e.g., forming part of annual standard government budget allocations) or that comprise part of ongoing funding allocations. Government investment mobilized for DECEM and FSM R&D is based on estimated development budgets (i.e., not recurrent operating budgets) for the duration of project implementation arising from pipeline bilateral projects and grants that are in line with the proposed GEF7 project - mostly for agriculture, forestry and coastal protection (mangroves restoration). This parallel investment by government is expected to be directly aligned to the project objective and outcomes and includes investment in the project demonstration landscapes (e.g., investment to put in place better protection of watersheds and critical coastal ecosystems, promotion of resilient and sustainable SLM practices (sustainable agroforestry, organic farming, etc.) and sustainable infrastructure development. Co-financing by UNDP–Fiji Multi-country Office represents a contribution from a non-GEF project, the "Enhancing Disaster and Climate Resilience in the Federated States of Micronesia Through Improved Disaster Preparedness and Infrastructure" (EDCR). The EDCR project will provide weather data for use especially by line ministries responsible for the agricultural component of this project to help ensure that stakeholders and populations of the pilot landscapes have access to climate information. This is listed as in-kind, recurrent expenditure to be conservative at PIF stage. CSO co-financing is estimated based on investments from organizations and regional institutions with foreign funding support for improved ecosystem management including protection and rehabilitation of critical terrestrial and coastal ecosystems, climate change adaptation and SLM. This is listed as in-kind, recurrent expenditure to be conservative at PIF stage. Following discussion between FSM's National Government focal point in DECEM and the GEF Secretariat, no indicative private sector co-financing estimate is included at PIF stage. This will be re-visited at PPG stage with in-kind contributions to be confirmed from chambers of commerce in each state, SME agricultural enterprises, farm businesses and the infrastructure sector in the project landscapes. Sources and amounts will be verified in co-financing letters presented at the time of CEO Endorsement. In addition, the option of utilizing Land Grant funds of the College of Micronesia Cooperative Research & Extension (CRE) programme as match-funding will be explored at PPG stage.

D. Indicative Trust Fund Resources Requested by Agency(ies), Country(ies), Focal Area and the Programming of Funds

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount($)	Fee($)	Total($)
UNDP	GET	Micronesia	Land Degradation	LD STAR Allocation	4,657,310	442,444	5,099,754.00
UNDP	GET	Micronesia	Biodiversity	BD STAR Allocation	497,945	47,305	545,250.00
				Total GEF Resources($)	**5,155,255.00**	**489,749.00**	**5,645,004.00**

E. Project Preparation Grant (PPG)

PPG Required **true**

PPG Amount ($)	PPG Agency Fee ($)
200,000	19,000

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount($)	Fee($)	Total($)
UNDP	GET	Micronesia	Land Degradation	LD STAR Allocation	150,000	14,250	**164,250.00**
UNDP	GET	Micronesia	Biodiversity	BD STAR Allocation	50,000	4,750	**54,750.00**
				Total Project Costs($)	**200,000.00**	**19,000.00**	**219,000.00**

Please provide justification

***Note: $200,000 requested to enable inclusion of all four States in the project, based on risks from land degradation and the need for progress towards land degradation neutrality. The PPG will incur high travel costs (Yap State is 2,777 km from Kosrae State) and more days in the field for PPG team to consult closely with each state and the communities to understand their context/needs and secure their engagement, and to gather the required information for a strong baseline.**

Core Indicators

Indicator 3 Area of land restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
985.00	0.00	0.00	0.00

Indicator 3.1 Area of degraded agricultural land restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
313.00			

Indicator 3.2 Area of Forest and Forest Land restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
353.00			

Indicator 3.3 Area of natural grass and shrublands restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
208.00			

Indicator 3.4 Area of wetlands (incl. estuaries, mangroves) restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
111.00			

Indicator 4 Area of landscapes under improved practices (hectares; excluding protected areas)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
7064.00	0.00	0.00	0.00

Indicator 4.1 Area of landscapes under improved management to benefit biodiversity (hectares, qualitative assessment, non-certified)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
722.00			

Indicator 4.2 Area of landscapes that meets national or international third party certification that incorporates biodiversity considerations (hectares)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Type/Name of Third Party Certification

Indicator 4.3 Area of landscapes under sustainable land management in production systems

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
6,342.00			

Indicator 4.4 Area of High Conservation Value Forest (HCVF) loss avoided

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)

Documents (Please upload document(s) that justifies the HCVF)

Title	Submitted

Indicator 5 Area of marine habitat under improved practices to benefit biodiversity (excluding protected areas)

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
580.00			

Indicator 5.1 Number of fisheries that meet national or international third party certification that incorporates biodiversity considerations

Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)

Type/name of the third-party certification

Indicator 5.2 Number of Large Marine Ecosystems (LMEs) with reduced pollutions and hypoxia

Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (achieved at MTR)	Number (achieved at TE)
0	0	0	0

LME at PIF	LME at CEO Endorsement	LME at MTR	LME at TE

Indicator 5.3 Amount of Marine Litter Avoided

Metric Tons (expected at PIF)	Metric Tons (expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)

Indicator 6 Greenhouse Gas Emissions Mitigated

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO_2e (direct)	3433	0	0	0
Expected metric tons of CO_2e (indirect)	0	0	0	0

Indicator 6.1 Carbon Sequestered or Emissions Avoided in the AFOLU (Agriculture, Forestry and Other Land Use) sector

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO_2e (direct)	3,433			
Expected metric tons of CO_2e (indirect)				
Anticipated start year of accounting	2023			
Duration of accounting	20			

Indicator 6.2 Emissions Avoided Outside AFOLU (Agriculture, Forestry and Other Land Use) Sector

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO_2e (direct)				

Expected metric tons of CO_2e (indirect)	
Anticipated start year of accounting	
Duration of accounting	

Indicator 6.3 Energy Saved (Use this sub-indicator in addition to the sub-indicator 6.2 if applicable)

Total Target Benefit	Energy (MJ) (At PIF)	Energy (MJ) (At CEO Endorsement)	Energy (MJ) (Achieved at MTR)	Energy (MJ) (Achieved at TE)
Target Energy Saved (MJ)				

Indicator 6.4 Increase in Installed Renewable Energy Capacity per Technology (Use this sub-indicator in addition to the sub-indicator 6.2 if applicable)

Technology	Capacity (MW) (Expected at PIF)	Capacity (MW) (Expected at CEO Endorsement)	Capacity (MW) (Achieved at MTR)	Capacity (MW) (Achieved at TE)

Indicator 11 Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment

	Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
Female	2,421			

Male	2,421			
Total	4842	0	0	0

Provide additional explanation on targets, other methodologies used, and other focal area specifics (i.e., Aichi targets in BD) including justification where core indicator targets are not provided

The project's contributions to core indicators at PIF stage are based on the project targeting four demonstration landscapes (totaling 3,367 ha) with a mix of areas in productive land, natural habitats, and community managed areas under improved management practices. The proposed landscapes and selection criteria are detailed in Annex A. The number and extent of landscapes will be confirmed during the PPG phase based on detailed assessment, delineation and consultations with local communities, and the core indicator contributions finalized. Experience from the GEF-5 R2R project was taken into account to ensure that the proposed core indicator targets would be feasible. Core indicator 3 is based on the area of landscape that is undergoing restoration in terms of ecosystem function and/or ecology and includes: (i) ecosystem restoration that reduces the causes of decline and improves basic functions; and (ii) ecological restoration that enhances native habitats, sustains ecosystem resilience, and conserves biodiversity. Improving these areas will lead to enhanced ecosystem services of vital benefit to local communities through improved water quality and quantity, climate resilience and food security. They include areas of degraded agricultural land (Core Indicator 3.1), forest land (3.2), savannah (3.3), wetlands (3.4). Core indicator 4 is based on the combined total for sub-indicators 4.1 and 4.3. 4.1 Area of landscapes under improved management to benefit biodiversity has a target of 722ha which includes: a) the remaining biodiversity rich habitats of the demonstration landscapes not already covered by the other indicators (rivers/riparian and wetlands) which will benefit from improved management by inclusion in the integrated landscape management plans (=222ha), plus; b) a conservative estimate (500ha) of the area of landscapes across the remaining land area of the high islands that will benefit from mainstreaming biodiversity into land use or management plans. 4.3 Area of landscapes under sustainable land management in production systems has a target of 6,342ha which includes: a) 842ha within the demonstration landscapes of mainly agroforestry/forestry), plus; b) a conservative estimate (5,500ha) of the area of landscapes across the remaining land area of the high islands (see footnote 2 for further detail) that will benefit from mainstreaming SLM into land use or management plans. Many FSM communities including those within the proposed landscapes live subsistence livelihoods and generate income through the informal economy. These areas are critical for community livelihoods (e.g., watersheds as sources of water for drinking and domestic use, land use for subsistence agriculture/agroforestry. Land where productive use is the primary form of management has been included under core indicator 4.3. Core indicator 5 is based on the area of mangroves, lagoons, seagrass beds and reefs included in the project landscapes (less the area of mangroves to be restored under Core Indicator 3.4 to avoid double-counting), which will benefit from improved management practices as well as reduced sedimentation and pollution because of their inclusion in the integrated landscape management and rehabilitation plans (Output 3.1) and SLM measures in Outputs 3.2 and 3.3. For core indicator 6, an initial indicative estimate of 3,433 tons of carbon dioxide equivalent will be mitigated through the promotion and adoption of sustainable land management practices in agroforestry, which will result in avoided forest degradation. GHG mitigated from the project is estimated using FAO EX-ACT and includes the direct benefit only at PIF stage based on a conservative estimate of project impact until activities are better defined, and the project landscapes delineation completed. Potential impact due to avoided soil degradation in agricultural lands or potential forest loss avoidance (including for mangroves) can only be calculated when areas and activities are better defined during the PPG phase. Please refer to Annex D for details / assumptions on initial tCO2e estimates. The estimated number of direct beneficiaries under core indicator 11 is based on the following indicative information: at national and state levels at least 222 officials, NGO or private sector representatives will be capacitated through engagement in project activities and governance mechanisms (M:F 50:50); in the demonstration landscapes, 4,620 people (M:F 50:50) will engage directly in and benefit from improved landscape management including improved ecosystem services and livelihoods. This is based on an indicative estimate of reaching all households in the demonstration landscapes, the great majority of whom can be expected to be engaged in some form or another in the agricultural sector. This includes smallholder farm households that will participate in sustainable land management and livelihood activities linked to a specific farmer's profitability target. These indicative estimates sum to 4,842 people (M: 2,421; F: 2,421).

Part II. Project Justification

1a. Project Description

1) The global environmental and/or adaptation problems, root causes and barriers that need to be addressed (systems description);

The Federated States of Micronesia (FSM) comprises 607 islands in the western Pacific[1], with an exclusive economic area of 2.98 million km^2 and a total land area of 702 km^2. As an independent nation with its own sovereign Constitution and a western form of government, the FSM retains a close relationship with the USA through a Compact of Free Association which provides substantial but reducing funds for the government and is due to expire in 2023[2]. The country comprises four semi-autonomous States (Chuuk, Kosrae, Pohnpei and Yap) with a total population of around 105,000[3],[4] which has declined since 2000 due to out-migration. Almost a third of the population live in poverty[5], particularly affecting children and female-headed households. The country's low annual GDP growth[6] is constrained by extreme remoteness from major markets, small population and landmass, geographic dispersion and vulnerability to external shocks and environmental fragility. The domestic economy is highly dependent on imports, with foreign aid and the selling of fishing rights being the main economic drivers.

Globally significant environmental features include: an astonishing range of terrestrial, coastal and marine ecosystems lying within the Polynesia-Micronesia global biodiversity hotspot and comprising part of two Global 200 WWF ecoregions[7]; two endemic bird areas[8] and 58 Key Biodiversity Areas (KBAs) [9]; one of the world's most endangered rainforests on the peak of Mt Winpot (Chuuk State); the largest green turtle *Chelonia mydas* rookery in the insular Pacific; globally rare montane cloud forests at just 450 m on Pohnpei and Kosrae; and a diversity of marine ecosystems from high volcano islands of more than 80km^2 with fringing and barrier reefs to coral atolls including Chuuk Lagoon, among the world's largest (3,130 km^2) and deepest (60 m), as well as the world's deepest trench (Marianas). Endemism is very high, a result of a unique combination of distance and isolation. Of the 782 native plant species, over 200 are known to be endemic. Native terrestrial mammals are limited to six taxa of fruit bats, of which five are endemic. A total of 240 species of birds are recorded in Avibase, of which 22 species are endemic[10]. Amphibians are not native to FSM, while of the 27 species of reptiles, five are endemic. The IUCN Red List for the FSM[11] includes 107 globally threatened species (2 mammals, 16 birds, 5 reptiles, 27 fishes, 55 invertebrates (mainly corals) and 1 plant species, demonstrating the great vulnerability of the country's biodiversity.

Land degradation from human activities is the main threat to the FSM's remarkable terrestrial, freshwater, and coastal ecosystems, their biodiversity and the vital ecosystem services they provide to communities throughout the four States – and is the focus of this proposed GEF-7 project which will be implemented on the "High" islands of each State, where most people reside. The project builds strongly on the achievements of previous GEF interventions (see project baseline) and addresses national and state priorities by focusing on mainstreaming of sustainable land management and biodiversity into the agriculture and infrastructure sectors and building the foundations for achieving land degradation neutrality.

The terrestrial ecosystems of FSM's high islands are dominated by forests (87.1% of the land area), primarily upland/montane rainforest (29.4% of the total) and agroforest (27.3%). These forests harbour important biodiversity and provide critical ecosystem services in particular the provision of water (quality and quantity), clean air and carbon sequestration. Coastal (strand) forests also help to stabilize the coastal dunes, reduce the extent of beach erosion, and provide a windbreak from strong winds, desiccation, and salt spray. Forest cover in 2016 was estimated to be 54,386 ha[12], with the largest expanse in Pohnpei (33,000 ha), and the smallest in Yap (almost 7,000 ha). Agroforestry is integral to the culture and subsistence economy on which 60% of the population depends[13], and the agriculture sector provides food, livelihoods, and employment for a significant proportion of the population. 90% of households engage in agriculture[14] and 63% in agroforestry[15], with agriculture and livestock accounting for 14% of household income[16]. Due to the small land area and tenure systems, farm production is generally small scale for local consumption and to support relatively small export sales. Traditional agro-forest systems are based on biotic diversity and polyculture and have served as the main source of indigenous food crops, for culture, health, environment, economic and food security (CHEEF benefits) over generations. There are many varieties and cultivars of staple food crops, such as 55 banana, 133 breadfruit and 171 yam cultivars for Pohnpei alone[17], all of which are potentially important for food security and more so in the face of climate change. Properly managed, these home garden /agroforestry systems can be highly productive whilst also delivering important environmental services such as soil stabilization, carbon sequestration, clean water, and air. More than half of the crops cultivated are tree crops (e.g., papaya, breadfruit, banana, coconut) and root crops (e.g., taro, yam, tapioca, sweet potatoes) followed by cash crops (mainly sakau in Pohnpei and betel nut in Yap). Farmstead livestock production (particularly pigs and chickens) is also important for subsistence and cultural use[18]. Despite this production, 35% of household budget is spent on imported processed food and non-alcoholic beverages. Recent changes in lifestyle and diet have been accompanied by a shift from subsistence to a cash economy and increases in non-communicable diseases / decline in health which is promoting a return to local fresh island foods[19].

The major coastal habitats of the high islands (mangroves, seagrass beds, lagoons, and coral reefs) form highly integrated ecosystems between the offshore marine and terrestrial areas, supporting multiple ecosystem services and rich biodiversity. Coral reefs cover 4,925 km^2 across the country, serving as breakwaters and providing the sand and sediment in which mangroves and seagrasses grow. At the same time, the mangroves (covering 9,112 ha) and seagrass beds sequester large amounts of carbon[20],[21], stabilize currents, settle sediments from the land (potentially with a strong capacity to offset sea level rise[22]) and provide nutrient inputs (detritus) into the coastal ecosystem, as well as habitat / nursery grounds for many species of invertebrates, fish, and turtles. Mangroves are particularly important to coastal protection from erosion and storm waves and provide products for subsistence economies such as firewood and building material as well as regulating water quality (buffering the effects of runoff sedimentation and pollution). Inshore fisheries in mangroves, reefs, and lagoons are vital to livelihoods and food security. They are particularly important to subsistence (artisanal) fishers who utilize small-scale fisheries for sale at local, small markets, generally using traditional fishing techniques and small boats.

While responsibility for environmental issues is shared between the national and individual state governments, the States have significant autonomy, with the national Government providing guidance and technical assistance when needed and requested on matters related to planning, economic development, natural resources, fisheries, and the environment. Land tenure can be complex and varies between the states, greatly influencing the use and management of natural resources and options for facilitating SLM[23]. In Yap, approximately 98% of land (including reef systems) is privately owned by family and clan groups or managed by individual estates. In Chuuk, most land and nearshore marine areas are owned by families, and customary rights are still followed. In Kosrae and Pohnpei, land is both privately and state owned, while marine areas are owned by the State. Group and communal ownership of land is the prevalent form of private ownership, influenced to varying degrees by customary land tenure systems.

FSM is particularly vulnerable to the risk of COVID-19 due to its economic reliance on international travel of residents, tourists, and trade. Although up to May 2021 there had been zero confirmed cases of COVID-19 and zero deaths in FSM[24], the global pandemic has impacted the economy and livelihoods across the country, particularly for the poorest and most vulnerable. It adds to existing social and economic inequalities[25] and environmental challenges and highlights the need to build resilience and wider policies and initiatives to deliver sustainable public goods and services. With support of ADB, the government established a US$15M economic stimulus package in response to the pandemic to implement the Health Action Plan and support the tourism sector, with loans to SMEs and temporary unemployment assistance[26]. The pandemic is diverting government attention and causing delays to implementation of projects[27] and programmes. This proposed project has therefore put a strong focus on building resilience (through reducing land degradation) and promoting green economic recovery and improved livelihoods particularly for small holder farmers. This will be achieved by skills training, promoting local, healthy added value products for local markets and business diversification.

Threats

The State of the Environment Report 2018[28] and 6th national report to the CBD[29] and the FSM's reports to UNCCD summarize the key drivers and pressures impacting FSM's environment. On the high islands, economic development challenges, changing cultural practices, demographic shifts and climate change are placing major pressures on sustainable resource management. On these islands with small landmasses, there is a clear link between ecosystem health and services and goods for the communities. Critical ecosystem services and biodiversity that ensure clean and adequate water supply, food production, productive inshore fisheries, storm protection and carbon sequestration are being lost and degraded, with impacts particularly affecting the poorest and most vulnerable. The key threats to FSM's terrestrial, freshwater and coastal ecosystems and their critical ecosystem services are[30]:

Land degradation: The FSM's forests have a long history of disturbance from human settlement and use primarily through conversion of native forest for agroforestry. This has influenced forest structure and species composition over time particularly in the lowlands, but also in the uplands of Pohnpei and to a lesser degree Chuuk and Kosrae. Whilst well managed agroforestry following traditional practices can sustain communities with limited impacts on ecosystem services, recent trends and practices have brought land degradation and negative impacts on critical ecosystem services and biodiversity. These trends have been exacerbated on some islands by demand for farmland for cash crops and because of migration of people from outer islands or lagoon islands to the high islands (e.g., in Pohnpei and Yap), and also reducing job opportunities in the public sector causing people to return to subsistence agriculture. Additional causes of land degradation are changing agricultural practices (use of chemical fertilisers and pesticides and an increased focus on monoculture of cash crops). Declining soil fertility is a key issue for all states exemplified by depleting essential soil nutrients and soil organic carbon content and decreasing the infiltration capacity of the soil. By 2016, 45% of forest area showed signs of disturbance from human activities and climate events, and in 2020 it was estimated that only 6,213 ha of intact forest remained[31]. For instance, in Pohnpei, encroachment of sakau *Piper methysticum* (a high-value cash crop) farmers into the upper watershed severely reduced the area of primary forest from 15,000 ha in 1975 to 4,200 ha in 2002 with direct impact on biodiversity and ecosystem services, affecting vulnerable and endemic species, facilitating expansion of invasive plants, and increasing erosion, diminishing soil fertility and water quality[32]. Forests in all four states are also being degraded by other activities such as bulldozing, unsustainable timber harvests (for firewood and logging), conversion to other uses and wildfires (particularly Yap). Degradation of watersheds on all the high islands increases erosion and sediments entering waterways and eventually lagoons, affecting surface freshwater quality as well as leading to siltation of the fringing reefs surrounding the islands and causing significant damage to critical inshore fisheries and biodiversity. This, combined with poor wastewater control due to inappropriate management of livestock (particularly piggeries) and a lack of proper sanitary systems, brings increased risk of bacterial contamination and impacts on the

health of the population. This is of particular concern in Pohnpei and Kosrae where communities use surface water from small streams as sources of drinking water. Solid waste management (SWM) also contributes to land degradation in all four states due to the lack of a strategic approach through regulations and enforcement and provision of proper facilities for recycling and landfill.

Invasive alien species (the subject of the GEF-6 project[33]) also contribute to land degradation, threatening local ecosystems, agricultural production, human and animal health, food security and biodiversity[34]. 592 introduced species are considered invasive or potentially invasive[35] in the FSM of which 89% are plant species, about 10% are animals[36]. Disturbance of natural habitats, shifting agriculture or abandonment of traditionally cultivated land as a result of out-migration or loss of soil fertility is allowing invasive species to flourish[37] so that they do not revert to forest, making this gardening system even less sustainable. For example, the invasive weed *Chromolaena odorata* smothers tree seedlings and increases vulnerability to wildfires, while invasive vines such as *Merremia peltata* impairs forest regeneration over large areas, especially on Chuuk. Feral pigs and introduced deer are also a potential threat to young trees.

Infrastructure development: The limited land area, high population density and shift from subsistence to a cash-based economy all impact land use and increase the need for services and connection and therefore infrastructure in all four States. Movements from the outer islands to the main islands, and of high island residents to urban areas[38] or inland, are increasing the demand for housing, roads, airstrips, utilities, and community facilities[39]. This demand, the availability of modern machinery, and (now declining) funding for infrastructure improvements under the Compact of Free Association with the U.S. has resulted in considerable and ongoing degradation and fragmentation of natural habitats. Roads pose direct threats by their “footprint” but can also impound and divert freshwater flows. The poor design of drainage systems contributes to erosion and sedimentation affecting homes and infrastructures. They also provide access to forests and extend the reach of secondary and private roads, opening land to further agricultural and other development. On the high islands, mangroves and freshwater wetlands are also under severe threat from new developments and are often being destroyed illegally for development land (fragmentation, channels, landfill and conversion, harvesting and pollution[40]), and are often used as waste dumps. The hydrological functioning of these wetlands can be greatly impacted by poorly constructed roads that bisect them without properly located culverts. This threatens biodiversity and food security as mangroves support fisheries and adjacent freshwater wetlands provide habitat for traditional *taro* patches.

Infrastructure development also dramatically increases the demand for natural resources such as freshwater, timber, sand/coral, and gravel for construction. These demands compound the problems of land degradation from agriculture in the watersheds and have a particular impact on sensitive coastal habitats where loss and degradation of mangroves, coral reefs, seagrass beds and lagoons are having serious impacts on coastal protection, inshore fisheries, and biodiversity in all four states. Coral reefs are mined for limestone and construction materials for use as bricks or road-fill or added to dredged sand from lagoons to make concrete for construction. Mining destroys reefs which are unlikely to recover for centuries[41] and causes other indirect impacts such as sand erosion, land retreat, sedimentation and affects water circulation. The cost of destroying or mismanaging 1 km^2 of reef results in losses estimated between US $137,000 and US $1.2 million over a 25-year period[42]. 30% of the FSM’s coral reefs are estimated to be under medium to high threat from local pressures[43],[44] including coral dredging and sand mining. Rapid Ecological Assessments conducted in Pohnpei (2005)[45], Yap (2007)[46], Kosrae (2006)[47] and Chuuk (2008) indicate that fish populations in reefs close to the larger, more urbanized areas are severely depleted. In some areas, reef destruction from over-fishing, road building, dynamiting, and dredging is extensive. For example, blasting had already damaged about 10% of the reefs in Chuuk lagoon (the largest single barrier reef in Micronesia) according to a 1994 survey and since then heavy urbanization, especially on Tonowas and Weno, has spurred

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dredging and filling for land expansion and development[48]. Large volumes of dredged coralline materials (~40,000-120,000 m^3/ project) are also regularly used for construction projects in Yap[49]. On Kosrae, dredging of the reef to use as fill in the construction of the airstrip may have caused coastal erosion. Physical damage to the coral reef framework is also caused by anchoring.

Sedimentation from land-based construction activities as well as agriculture has contributed to the degradation of nearshore coral reef ecosystems in all four states[50]. Coastal development is the lead cause of soil erosion and sedimentation in Kosrae. The construction of the circumferential road connecting Utwe and Walung exacerbated the impacts of soil erosion and sedimentation on the corals along Kosrae's southern reefs. Housing developments for residential and business purposes along the coast also contribute a great deal to the problem of sedimentation. Coastal development is one of the biggest stressors to the coral reefs of Pohnpei as well, with more than 50 dredge sites and mangrove clearings (man-made channels) surrounding the coast.

Climate change: Communities across the FSM are extremely vulnerable to the impacts of climate change, because of their direct reliance on the country's ecosystems and services for coastal protection, food, and water. The Global Climate Risk Index ranks FSM as the third most at risk of the Pacific Island countries[51]. The main concern at the community level is rising sea-levels and increasing frequency/severity of typhoons with the resulting loss of agricultural capacity, pollution of drinking water and impacts on infrastructure and critical natural habitats such as mangroves. Sea levels are rising by 10mm per year[52], more than three times the global average, leading to more aggressive 'king tides' and coastal erosion. Climate change scenarios suggest a real possibility of islands (particularly the low-lying atolls) reducing in landmass, with increased land fragmentation, impact to coastal infrastructures and limited access to traditional agricultural sites e.g., coastal taro swamps and this is also a severe problem around the coast of all the high islands. For example, most of mainland Yap's most fertile (alluvial) soils are vulnerable to storm surge and recent high waters have damaged or destroyed taro production areas in low lying areas and most taro patches in the outer islands. Due to the traditional land tenure system for some states, loss of landmass can potentially trigger inequalities among the communities and migration to other countries or other islands. Indeed, residents of high islands are increasingly moving inland as a result of coastal erosion and shifting weather patterns, contributing to land degradation due to the increasing demand for housing and infrastructure[53]. Therefore, climate change is impacting people, infrastructure and ecosystem services, affecting water and food resources, and the coastal protection provided by coral reefs and mangroves. Droughts, wildfires, and storms associated with more frequent cyclones and severe El Niño-Southern Oscillation (ENSO) activity are having increasingly serious impacts on watersheds and forests, posing a great threat to traditional agroforestry systems (including through saltwater intrusion near the coast). On two occasions in the last 30 years, at least 22% of Yap has been burnt during drought periods. Agroforestry was impacted by typhoon Maysak and the El Niño-induced drought of 2016–17, considerably affecting FSM's household subsistence economy. In addition, by 2030, projections for thermal stress and ocean acidification suggest that all FSM reefs will be threatened with about 50% at high, very high, or critical threat levels[54]. These impacts provide a glimpse into the potential consequences of future sea level rise.

In conclusion, land degradation as a result of encroachment of farmland into watersheds, unsustainable agricultural practices, as well as infrastructure development is degrading the critical ecosystem services and biodiversity that sustain the livelihoods and health of communities across the FSM. The threats arising from land degradation are being exacerbated by climate change.

The long-term solution sought by the project is therefore to assist the government, communities and the private sector to promote sustainable land management and biodiversity mainstreaming in the agriculture and infrastructure sectors with the goal of achieving land degradation neutrality for the protection and restoration of ecosystem services and biodiversity – which are key targets in the FSM's commitments under the UNCCD and CBD. Despite the baseline described below, there remain a number of barriers to achieving this vision, as follows:

Barriers to achieving this vision:

Insufficient policy, regulations, and coordination to promote sustainable land management and achieve land degradation neutrality: Although the FSM ratified the UN Convention to Combat Desertification (UNCCD) in 1996, no National Action Program (NAP) is in place to implement the Convention. Furthermore, Land Degradation Neutrality (LDN) [55], a key tool of the UNCCD for helping countries to address and monitor land degradation remains, a new concept with no adoption yet into policies, plans, or practices and foundations need to be built that enable the identification and resolution of policy or regulatory trade-offs. Lack of an overarching policy, legal and regulatory framework for addressing land degradation inhibits strategic action and dissipates the already limited human and financial resources, which are a barrier in themselves. This is compounded by the sharing of responsibility for the legislative framework at the national, state, and municipal levels that can result in duplications, gaps, and lack of clarity. There are specific policy and regulatory gaps and institutional differences in all four states to address land degradation and related losses of ecosystem services and biodiversity including for: watershed protection; coastal development (zoning plans, dredging for sand/coral materials for construction, mangrove management and harvesting); animal husbandry (to ensure proper safeguards to prevent negative impacts). Stringent permit requirements (e.g., for extending agriculture into forests, dredging of coastal habitats or infrastructure development) and effective enforcement are seriously lacking, and government funding to tackle these stressors is reducing. Complex political and institutional structures, and bureaucratic channels for communication also hinder progress. Effective policy implementation to address land degradation will require multiple agencies and groups to work in concert on clear policies and plans that mainstream SLM and biodiversity that are agreed by all. Although some states have joint enforcement agreements between national, state, and local government, this is not the case for all. There is a need to focus and coordinate functions across agencies and with non-government and private sector stakeholders – a key role at national level for the national Department of Resources and Development. Although cross-sector working groups for sustainable natural resources management exist in some FSM states, their capacity is low and they need to be nurtured to achieve self-sufficiency. Land use plans need to be developed or improved and areas in need of rehabilitation need to be accurately mapped for the purposes of planning and budgeting.

Insufficient budgetary allocation to the natural resources management sectors continues to be a key constraint which has reduced human resources and service delivery by government institutions, weakening opportunities to address land degradation. There is inadequate coordination of available funds and projects that could support sustainable land management (many of which are funded under *ad hoc* project budgets from development partners) to target prioritized policy actions and streamline service provision. This often limits the long-term financial sustainability after project funding has ended. There is a need for better access to global funding opportunities and increased capacity for implementation to address land degradation, including through climate adaptation finance, which could be achieved through better strategic planning and demonstration of the global benefits that could be achieved. Financial incentives and disincentives are needed to support achievement of land degradation neutrality.

Lack of information, tools and capacity in government: Even though natural resources are being degraded at a rapid rate, there is no system to monitor land degradation, no agreed indicators, targets or baseline against which to measure progress. Without a proper assessment, monitoring, and planning regime for the maintenance of ecosystem services and biodiversity, managers will continue to struggle to integrate environmental information and risk assessments into decision-making. There are also severe data limitations for monitoring land degradation, both for the agriculture and infrastructure sectors. Up to date information is required for efficient planning and budgeting and to monitor the effectiveness of policy and investments, making it difficult to assess development outcomes and draw lessons. Vegetation maps are considerably out of date and there is an urgent need to access up to date high resolution remote sensing imagery to determine degradation of watersheds and coastal zones and to produce updated vegetation /degradation maps to determine trends and prioritize areas for rehabilitation[56]. For example, the MTR of the GEF-5 project noted the critical absence of data on forest pressure (e.g., % annual change in forest cover within the project sites). LIDAR imagery is also required to enable natural resource planners to evaluate threats of sea level rise and storm surge on the coast. There is no formal mechanism to monitor coral harvesting.

There is an urgent need for best practice protocols and technical guidelines to assist the states to effectively plan land-use and development so as to avoid and mitigate land degradation in watersheds and the coastal zone through the application of ecologically acceptable norms and standards as well as the EIA process. Expert advice, protocols and technical guidelines are particularly needed to guide planning and development activities on the coast where insensitive engineering and infrastructure development is frequent. For example, the construction of roads without the incorporation of gated culverts between critical agricultural lands, wetlands and mangroves interrupts the crucial hydrological flows in the freshwater/ saltwater interface. Dredging of lagoons for aggregates also has severe impacts and requires clear protocols. Practical expertise is also required in the maintenance and restoration of mangroves to protect coasts. Similarly, there is a lack of ecologically acceptable rehabilitation protocols relating to agriculture and infrastructure development in watersheds which can lead to inappropriate practices in rehabilitation, e.g., the alien invasive *Acacia confusa*, has been widely used in tree-planting on Yap. There is a lack of best practice guides for managing watersheds, forests, agroforest, and mangroves as well as for sustainable infrastructure.

Capacity at all levels, from government and policy-making to implementation at the community level, is an ongoing challenge, limiting what can be achieved even though intentions are good and ambitions high. Limited human resource capacity and budgets in the natural resources sector severely constrain leadership, coordination and the level of support services provided by government agencies. Government expenditures currently focus on salaries, whilst expenditures for non-wage operational costs and new investments are limited. Many specialists are approaching retirement and with funding declining under the Compact of Free Association, additional funding for government positions is unlikely. Extension services provided by the College of Micronesia (COM) are constrained by a lack of technical and vocational training, lack of appropriate methods, inadequate budgets, and limited human resources. As a result, farmers lack vital extension services information on sustainable land management and food production, and opportunities for improving their livelihoods – leading to further land degradation. There is a need to increase the capacity and equipment of the designated GIS practitioners in each state so they can enhance spatial analyses on land degradation using new technologies.

Insufficient demonstration of how to combat land degradation at landscape scale, and the benefits of conserving ecosystem services and biodiversity by adopting sustainable land management practices: Increase in demand for land for subsistence and commercial production, as well as ongoing infrastructure development raises urgent issues about carrying capacity of the land, further encroachment into watersheds and sustainable production methods[57]. Although there are many small-scale examples of different aspects of SLM being practiced through community-based natural resources management in the

FSM (see baseline description), none have been implemented in a concerted way to meet targets for achieving land degradation neutrality at landscape level. As strategies for climate change adaptation, the JSAPs from the four states highlight the need to protect ecosystems and biodiversity through landscape level management as well as enhancing coastal protection, rehabilitation, and management (including mangroves[58]). Land use plans exist for only two of the four states, are not yet being implemented effectively and they do not incorporate targets for achieving land degradation neutrality. The diverse and complex arrangements around land tenure (including customary traditions) also make landscape level working more complex and demand a high degree of public participation. There is a need for a stronger consultative process for environmental planning, including children, elders, women, and communities in order to effectively develop or enforce management plans[59].

There is an urgent need to improve agroforestry management and reduce soil degrading activities. While the national and state governments and communities recognize the importance of soil health, there are limited actions specifically targeting improved soil health and to restore highly degraded soils to ensure agroforestry productivity and food security as a response to climate change and as a means of helping restore terrestrial ecosystem functions[60]. Similarly, infrastructure development both inland and on the coast is proceeding with many negative impacts on ecosystem services. Innovative and experimental projects at scale using low-cost practical technologies, that demonstrate landscape-level protection and rehabilitation of lost ecosystem services are urgently needed. Rehabilitation of degraded forests is a priority, but as Compact funding decreases more emphasis is needed for the development of community tree nurseries, such as the one established in the Municipality of Tomil, Yap.

Farmers are only likely to change to more sustainable practices if there are economic or resilience benefits from doing so – legislation is unlikely to be successful because of the challenges of enforcement due to weak government capacity and contradictions with cultural norms. The high cost and unreliability of utilities and transport, and the lack of accessible and sustained markets for agricultural products, also constrain agribusiness development. Efforts to promote sustainable agriculture and land management must therefore focus on improving profitability and resilience by reducing costs to farmers as well as supporting value chains that can supply local markets. There is a need therefore to demonstrate such approaches and re-align extension services to help farmers address soil fertility, crop production, pest control and post-harvest management in ways that reduce the need for expensive chemicals and seeds. Similarly, the culture of entrepreneurship with associated skills in business practice is lacking. This lack of capacity among local farmers to present sound business plans to financial institutions has impeded this sector's ability to access loan products even though these exist[61]. As a result, processing and value-adding of agricultural products is very limited. Extension services should therefore support development of these skills to support a more market-driven and demand-led approach. Opportunities that exist locally in terms of the increasing demand for quality, healthy and local foods are not being met. Post COVID-19 opportunities are expected to return for farmers to engage with the tourism sector – providing farm-tours and farm-stays as part of the cultural experience for visitors.

<u>Inadequate awareness and knowledge exchange and mainstreaming of women and youth to achieve LDN and protect ecosystem services</u>: The MTR of the GEF-5 project reported a lack of public understanding about the linkages between terrestrial and coastal-marine systems, and therefore the ecosystem services they provide and the consequences of land degradation. For example, the impact of infrastructure development activities such as roads, airstrips, earth moving activities, and dredging is generally unappreciated by the public, and there is no understanding of the concept of land degradation neutrality. The Joint State Action Plans (JSAPs) for each State similarly identify the need for improved awareness and education and strengthening of traditional practices and knowledge for increasing the resilience of communities to climate change. As a consequence of inadequate awareness and therefore lack of advocacy by

the communities, low value is accorded to sustainable land management in fiscal policy instruments. There is also poor awareness of solutions to environmental problems through sustainable land management via the agriculture and infrastructure sectors. Examples include: the need for understanding of the importance of restoring of organic matter levels in soil and the ecological processes required; how traditional saltwater- and drought-resistant crops can help adapt to climate change; or how the inclusion of culverts to allow water to pass under roads can help sustain ecosystem services and protect mangroves. There is a need to raise awareness in traditional community networks and among private landowners to marshal cooperative actions and sustainable practices, including watershed and coastal zone management, to address threats from land degradation. Raising awareness may also help mitigate the lack of resources in government, by reducing the need for enforcement of laws.

Policy and decision-makers, government officials, extension workers and practitioners in SIDS all face common challenges in achieving LDN/SLM and biodiversity conservation, particularly because of isolation from peers and lack of opportunities for knowledge sharing. This hinders the take-up and up-scaling of good practices. Knowledge sharing in the FSM on sustainable land management is lacking at local, state, and national levels, and with other countries due to the lack of mechanisms and knowledge of where best practices can be found. Loss of knowledge on traditional cultivation of local crops and transfer of traditional agroforestry knowledge has become an important constraint. Although demonstration farms exist in each state they are inactive due to lack of incentives. There is also a need for more farmers' organizations in each state, run by farmers for farmers, to give farmers a voice, share best practices and engage farmers at landscape scale in sustainable land management and related livelihoods initiatives. Similarly, social media and knowledge sharing platforms need to be strengthened. Whilst there are many good practices around the Pacific and globally in sustainable land management and also sustainable infrastructure development, these are not being accessed or shared adequately in the FSM. Because of the cultural constraints, women and youth do not have the same opportunities as men and older people to access knowledge-sharing opportunities. Women and men both face constraints learning about sustainable agricultural practices, especially in remote areas where agricultural extension services are limited. Women are more constrained than men when it comes to benefiting from extension services because of other household responsibilities. Reduction in Compact funding means fewer public sector jobs for women and young people[62], and agriculture is therefore likely to continue to provide employment and livelihood opportunities for individuals with limited education and for those with improved technical training and entrepreneurial skills. Gender and age disaggregated information is rarely collected to monitor project outcomes.

2) Baseline scenario and associated baseline projects

While the overarching Constitution defines the National and State Government's roles in implementing the FSM's environmental management as well as environmental conventions, many key national and state government policies, laws and regulations, plans and initiatives underpin the targeted approach proposed by this project. Detailed information about the national and state level legal system and regulations is provided in a national database[63] and SPREP has published a review of natural resource and environment-related legislation[64].

The over-arching **FSM Strategic Development Plan, 2004-23** and the related **FSM 2023 Action Plan** outline the challenges and ambitions for achieving sustainable development, mainstreaming environmental considerations including climate change into national policy and planning for key economic development activities as well as to promote environmentally sound and sustainable production. The **State of Environment Report, 2019[65]** assesses the current state of the environment, the major drivers of change and the main environmental pressures created by these drivers, and examines their social, economic and environmental impacts as the basis for effective environmental management and planning. The associated **National Environmental**

Management Strategy 2019–2023[66] then provides the policy direction for government to address these environmental issues in a systematic way and to guide the coordination and collaboration of the stakeholders in the implementation of key policies, programs and actions. The **Agriculture Policy 2012-2016** recognises that sustainable development depends on ensuring an environmentally-friendly agriculture sector and promotes sustainable agriculture that will bring benefits to farmers (through improved incomes), to consumers (through healthier food choices) and to ecosystems (by increasing resilience). It provides the basis for action by both public and private sectors recognizing the major role of traditional farming systems (agroforestry) and the need to address the needs both of subsistence farm families and more commercial farmers and agri-business operators. The nation-wide **Integrated Disaster Risk Management and Climate Change Policy (2013)**[67] demonstrates the great importance attached to increasing FSM's adaptive capacity to adjust to climate change. It provides the overarching framework to address risks, and each State has subsequently developed Joint State Action Plans (JSAPs) for Disaster Risk Management and Climate Change[68] [69] [70] [71], providing a cross-sectoral framework for risk management and strategic prioritised actions to enhance resilience across vulnerable development sectors. All development activities in FSM must take into account projected climatic changes in the design and implementation. Water resources, agriculture, fisheries, coastal ecosystems and biodiversity were identified among the vulnerable sectors to climate change by all four States. The **Infrastructure Development Plan (IDP) 2016 – 2025** outlines the State and National infrastructure priorities with implementation overseen by state-level Infrastructure Planning and Implementation Committees each of which is supported by a Project Management Office (PMO) responsible for the planning and implementation of projects. An updated **Forest Action Plan, 2020-2030 (FAP)** has recently been approved by the US Forest Service[72]. This comprehensive document updates the State-Wide Assessment and Resource Strategy, 2010–2015+ (SWARS)[73] providing an excellent overview of the highest priorities for forest resource management in each state and has guided priorities included in this PIF. It identifies priority forest landscape areas and watersheds and highlights national, regional, and state forest management priorities. The **National Biodiversity Strategy and Action Plan 2018–2023** is implemented alongside separate BSAP's for each state. Its vision is that *The FSM will have more extensive, diverse, and higher quality of marine, freshwater, and terrestrial ecosystems, which meet human needs and aspirations fairly, preserve and utilize traditional knowledge and practices, and fulfil the ecosystem functions necessary for all life on Earth.* The **Micronesia Challenge**[74] established in 2006 originally aimed to effectively conserve at least 30% of the near-shore marine resources and 20% of the terrestrial resources across Micronesia by 2020; these goals were expanded in 2019 to effectively manage 50% of marine resources, including the exclusive economic zone (EEZ), and 30% of terrestrial resources by 2030. 130 Areas of Biological Significance have been identified, with 24 designated as priority action areas[75]. Great progress has been made to establish state, municipal, and community legislated and/or traditionally declared protected areas through close participatory working between government, NGO and community partners. At least 15% of FSM's land mass including important watersheds[76] and 27% of its mangrove forests is now in terrestrial protected areas and about 39% of the FSM's nearshore marine area is under some form of management[77]. **The National Protected Area Network (PAN) Policy Framework**[78] (2015) and state PAN regulations support management of protected areas. The Micronesia Conservation Trust (and the Micronesia Challenge Endowment Fund) supports biodiversity conservation programs and activities, leveraging more than US$30M to the region and supporting development of sustainable financing mechanisms.

The FSM Environmental Management and Sustainable Development Council (SDC), chaired by the Vice-President, provides an interdepartmental and cross-sectoral advisory board to address environmental issues at national level. At the time of writing discussions were underway for the strengthening, re-establishment or creation of cross-sector working groups in each of the four states to take responsibility for tackling issues for improved landscape / environmental management – but progress has been delayed due to COVID-19. These are: the Yap Environmental Stewardship Consortium (ESC); Chuuk State Environmental Working Group (SEWG); Pohnpei Resource Management Committee (responsible for the Watershed Reserve); and Kosrae Resource Management Committee. Many municipalities also have Resource Management Committees and women's organizations working on environmental issues.

In terms of available information and tools, significant progress has been made to coordinate the use of spatial information for natural resource management and a National Spatial Strategy and Framework is awaiting approval. DECEM's GIS and IT office currently hosts several publicly available environmental data portals, including the Inform Data Portal for environmental reports[79], Climate Change Data Portal[80], and Digital Atlas of Micronesia[81]. DECEM also assists the national and state offices with spatial information including providing basic mapping and GIS capacity trainings. The Forest Inventory and Analysis program conducts systematic inventories of the forests of each state with support from US Forest Service every 10 years and was last updated in 2017 (see the Micronesia Challenge Terrestrial Web Viewer[82]). Soil assessments were conducted in 1979–80[83], and the Department of Resources and Development conducted an Integrated Agriculture Census in 2016[84]. The MC coral reef monitoring program collects data through a consortium of organizations that includes NGOs, academia and government agencies.

Each State has made efforts to control development and manage natural resources through the creation of land use plans, coastal zone plans, legislation and regulations, but these differ by State and are at different stages of development. An Integrated Environmental Management Plan (IEMP) supported by a Strategic Environmental Assessment (SEA) is pending official endorsement by the Pohnpei State Government and some mangrove management plans also exist. An update of the 2003 Kosrae Land Use Plan is pending completion of an SEA, and a Kosrae Shoreline management plan was prepared in 2013[85], and the GEF-5 project is currently supporting a mini-SEA for Yap. Implementation of the Chuuk Forest Stewardship Plan (FSP) is ongoing, while implementation of the Yap FSP will start in 2021. The Environmental Protection Agencies (EPA) of Yap, Chuuk and Pohnpei, and the Kosrae Island Resource Management Authority (KIRMA) are responsible for conducting EIAs, with Kosrae having an advanced Development Review Process overseen by KIRMA.

Agricultural research and extension services are provided to local farmers across the country by the College of Micronesia (COM), with key program areas in aquaculture, small island agricultural systems and food, nutrition and health. They include associate degree programs in agriculture and natural resources. Agricultural Experiment (Research) Stations are funded by the US Department of Agriculture, and a China Friendship Demonstration Farm was opened in 2019 at the College of Micronesia[86], with funding from the Chinese Government providing agronomy courses and demonstration of technologies[87] in vegetable farming, piggery operations and biogas production.

A diversity of SLM activities can be found on the ground at different levels of implementation in all four States through both government and particularly NGO driven community initiatives. These include: sustainable agriculture (soil conservation, dry litter piggeries to reduce water pollution, composting); waste management; environmental impact assessment; integrated water resource management; forest and mangrove rehabilitation; and climate change mitigation planning. FSM has been active in recent years with a number of reforestation and afforestation campaigns in key watersheds, including the Greenbelt Nursery Establishment and Training program of work[88] where communities in Chuuk and Kosrae are re-establishing natural coastal buffers to mitigate against erosion, sea level rise and storms. In another example, the Peidie Community in Sokehs Municipality of Pohnpei has established a mangrove reserve to protect their community from destructive dredging activities including planting seedlings for coastal stabilization and shade trees[89]. Each of the State Forestry Divisions also operate nurseries to grow native forest species for reforestation of critical habitats including with urban and community forestry programmes. The Island Food Community of Pohnpei encourages the consumption of local produce to support health and nutrition and help conserve native varieties and cultivars. Other local community groups in the four states have been established to distribute seedlings to local people to encourage home gardens as a way to improve nutrition and to increase food security. Farmers associations exist in Pohnpei and Kosrae. A small number of 'green' product initiatives across the FSM have been developed, such as the Green Banana Paper company in Kosrae and the production of Wawa banana chips, also in Kosrae. However, there

remains a need for the development of larger-scale ecologically sustainable industries. Yap's Climate Adaptive Agriculture and Resilience project, supported by USAID's Pacific-American Climate Fund, has demonstrated how climate-smart agriculture supported by value-addition and marketing can bring new opportunities and greater resilience to local communities[90]. There are also examples of farms engaging with the tourism sector in each state, e.g., through farm stays, farm tours and local food supply, but this has been severely disrupted by the COVID-19 pandemic.

There is a rich baseline of previous and ongoing GEF investments, each with its own achievements and lessons for the proposed project to build-off. The **US$1.43M UNDP/GEF-3 medium-sized** ***Capacity building, policy development, and mainstreaming of sustainable land management*** **project (2008-11)** was a first attempt to strengthen capacity and the enabling environment for sustainable land management to address priority land degradation issues. The terminal evaluation concluded that the project had succeeded in raising awareness, building capacity and partnerships (including with NGOs) and improving the baseline understanding of SLM, but had made only small gains in mainstreaming SLM into the development processes, and that fundamental improvements were still needed. The **US$ 19.4M GEF-4** ***Micronesia Challenge: Sustainable Finance Systems for Island Protected Area Management*** **project (2010-16)** was instrumental in launching implementation of the Micronesia Challenge (see below), whose overall aim is to "effectively conserve at least 30% of the near-shore marine and 20% of the terrestrial resources across Micronesia by 2020". A key achievement was capitalization of the Micronesia Challenge Endowment Fund (MCEF) to support protected areas across the region. The **US$ 22.6M GEF-5 project** ***Implementing an integrated "Ridge to Reef" approach to enhance ecosystem services, to conserve globally important biodiversity and to sustain local livelihoods in the FSM***[91] **(2015-20)** has been extended by one year and is working to strengthen local, State and National capacities and actions to implement integrated ecosystem-based management through a "ridge to reef" approach on the High Islands of the four States. This project has supported the development of land use planning and strengthening the management effectiveness within new and existing PAs (both marine and terrestrial) but has been challenged by the over-ambitious scope and targets of the project design. Finally, the **US$13M GEF-6 project** ***Safeguarding biodiversity from invasive alien species in the Federated States of Micronesia***[92] ***(2020-25)*** will start implementation shortly and aims to safeguard biodiversity in terrestrial and marine ecosystems and in agricultural and fisheries production systems from the impacts of invasive alien species. It will focus on strengthening the national biosecurity governance framework and financing, enhancing biosecurity awareness and capacity, improving biosecurity protocols and access to and management of information on IAS. The **US$ 7.76M UNEP/SPREP regional GEF-PAS** ***Prevention, control and management of invasive alien species in the Pacific Islands*** project (2010-13) resulted in publication of a National Invasive Species Strategy and Action Plan 2016-21 (NISSAP). The **GEF-Small Grants Programme** has also financed several community projects on SLM including a dry-litter piggery revolving fund on Pohnpei to finance the moving and conversion of piggeries in order to reduce contamination of the watershed. The regional **Pacific Adaptation to Climate Change Project (2008-14)**, included a review of the Kosrae Shoreline Management Plan and supported climate proofing of coastal roads with new hydraulic design features that take into account flooding risks from increased rainfall and sea level rise.

Other relevant and recent internationally funded projects and programmes include: The **Natural Resources Conservation Service (NRCS) of the U.S. Department of Agriculture** that provides technical assistance and training for the conservation of soil and water resources to maintain productive and resilient agroforestry systems. including development of a natural resources plan, training, and implementing various agriculture, agroforestry and piggery demonstration projects and assisting individual farmers with conservation plans to protect and improve the soil resources on their farms and promote best practices. The US$ 9.0M **Enhancing the Climate Resilience of vulnerable island communities in Federated States of Micronesia** project (2018-2022) funded by the Adaptation Fund[93] aims to reduce the vulnerability of selected communities to risks of water shortage and increase their adaptive capacity to drought and flood-related climate and disaster risks, focusing on the outer islands. The Adaptation Fund also supported the US$ 0.97M (2018-21) MCT **Practical Solutions for Reducing Community Vulnerability to Climate Change in the Federated States of Micronesia** project. A US$ 8.58M (2022-26) **Climate resilient**

food security for farming households across the Federated States of Micronesia project proposal to the Green Climate Fund through the Micronesia Conservation Trust in collaboration with the FSM Government has recently been approved and will be implemented during the period of the GEF-7 project. Finally, a recently approved US$40M (2021-28) **FSM prioritised road investment management and enhancement project** aims to improve the resilience of the country's primary road network to natural disasters and climate change.

There has been an increased focus on management of mangrove habitats resulting from wider awareness of their role in shoreline protection and as a nursery habitat for fish. The Micronesia Mangrove Adaptation Initiative (MMAI) builds local capacity on Pohnpei and throughout Micronesia to increase coastal and community resilience by providing tools for communities and local governments to determine stresses on mangroves and plan actions to alleviate these stresses given climate change. As a part of this initiative the Micronesian Conservation Trust is supporting a Pohnpei Mangrove Management Planning project incorporating findings from a comprehensive mangrove vulnerability assessment and extensive stakeholder consultations. This will ensure that Pohnpei's mangroves and communities are more resilient to climate change and inform mangrove planning in other jurisdictions.[94]

The FSM has also made strides to include gender as a cross cutting issue in the areas of development and sustainable livelihoods, recognizing that women are the cornerstones of communities, including several projects related to SLM. Initiatives such as Micronesians in Island Conservation support peer-learning to help strengthen the organizational and technical skills of the leaders and organizations involved in protected area management. NGOs are playing a key role in promoting awareness of the values of conserving the natural environment. For example, the Conservation Society of Pohnpei's Green Road Show makes over 200 classroom visits per annum to secondary schools. An environmental student summer camp takes place in Chuuk, and a Youth-to-Youth program has been established in Kosrae. Various departments of the College of Micronesia are engaged in raising awareness and expanding environmental knowledge. Such efforts have increased the willingness to plant trees for coastal and watershed protection as described above.

3) The proposed alternative scenario with a brief description of expected outcomes and components of the project

The proposed project aims to secure the FSM's critical ecosystem services through climate-resilient sustainable land and coastal management contributing to land degradation neutrality. The long-term goal is to support achievement of all five objectives of LDN which are to: maintain or improve the sustainable delivery of ecosystem services; maintain or improve productivity in order to enhance food security; increase resilience of the land and populations dependent on the land; seek synergies with other social, economic and environmental objectives; and reinforce responsible and inclusive governance of land. The project will build on the technical guidelines of STAP[95] and FAO[96] for achieving LDN in SIDS using the LDN building blocks as a stepwise process. These are:

- **Leveraging LDN:** facilitating the engagement of decision makers and stakeholders involved in land management and the LDN target-setting process
- **Assessing LDN:** strengthening countries' capacities for making informed decisions on what action to take by assessing the current state of land and the drivers of land degradation, using the best available data
- **Setting LDN targets and associated measures:** supporting countries to define country's ambitions in combating land degradation by defining LDN targets and measures, and

· **Achieving LDN:** helping countries to create an enabling environment by integrating LDN into national policies and identifying investment opportunities along with transformative LDN programmes and projects

The fundamental aim of LDN is to preserve the land resource base, by ensuring no net loss of healthy and productive land as measured at the national level by following the response hierarchy of Avoid > Reduce > Reverse land degradation. In this hierarchy, avoid and reduce have priority over reversing past degradation, so that an optimal combination of actions can be identified and pursued with the aim of achieving no net loss across the landscape. The proposed project will address each element of the response hierarchy: Avoid - through improved land use planning and stopping further encroachment and impact of agriculture and infrastructure into natural habitats; Reduce - through SLM in the agriculture sector, and by improving standards and regulations affecting new infrastructure; Reverse - through targeted rehabilitation of degraded lands using nature-based solutions (natural infrastructure as well as promoting environmental improvements to the performance of existing physical infrastructure).

Whilst differences were identified at PIF stage between the states in their current information, capacity and tools to address land degradation, there was strong consensus on the priority issues to be addressed. These are:

· Watershed / forest degradation due to agricultural encroachment, deforestation and infrastructure development (e.g. quarries, mining), leading to soil erosion, changed run-off and sedimentation

· Unsustainable agriculture practices

· Pollution of watercourses from piggeries, waste, fertilizers etc.

· Mangrove / coastal wetlands destruction through conversion, cutting and waste

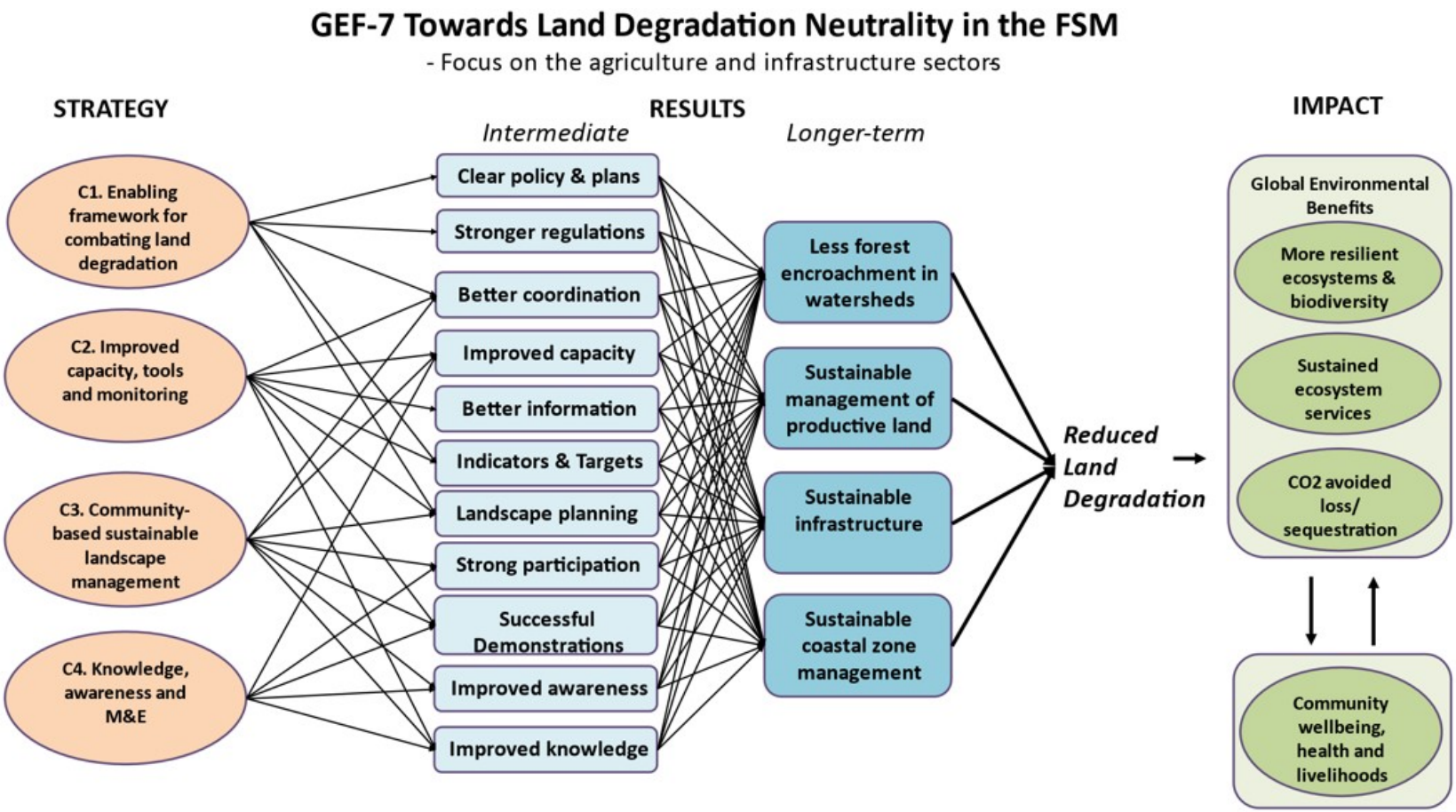
· Poorly designed coastal development (roads and infrastructure) projects and drainage systems affecting coastal erosion, homes, and natural habitats

· Dredging and sand/coral mining

Climate change was identified as a cross-cutting theme compounding all of these priority land degradation issues including through changes in precipitation and temperature and sea level rise.

Responding to the recommendation of the GEF-5 project's mid-term review that future GEF projects in the FSM should be built upon a robust Theory of Change (ToC), a ToC has been developed at PIF stage for this proposed project, informed by STAP Guidance[97]. This ToC is summarised in the diagram below and will be further elaborated during the PPG. It derives from analysis of the barriers to addressing land degradation and the baseline situation. It recognizes that land degradation is a severe and increasing threat to ecosystems and biodiversity in the FSM and the benefits they provide to communities, and that on the High Islands it arises principally from unsustainable agriculture and infrastructure development both in the watersheds, productive agricultural lands and on the coastal zone. Different aspects of SLM are already being implemented in some places across the four states, but best practices are not being applied in a concerted effort across landscapes to meet targets for LDN that result in less forest encroachment, sustainable management of productive land, more sustainable infrastructure and sustainable coastal zone management. The potential intervention pathways and assumed links to achieve the project objective include:

- If improvements in government policy and plans, regulations and coordination are made, then the effectiveness of government efforts to combat land degradation will also improve
- If better information, clearer protocols and tools are made available, then this will help the agriculture and infrastructure sectors to mainstream biodiversity- and environmentally-friendly practices that reduce land degradation into their programmes and projects
- If capacity of government officials and the private sector is enhanced, this will lead to improved implementation of mandates and enforcement of legislation
- If clear indicators and targets are set for avoiding, reducing, and reversing land degradation this will help to focus each state towards achieving LDN; avoiding land degradation will be more effective and efficient than trying to address it once it has occurred
- If communities are empowered, engaged in collective governance and equipped with knowledge in an integrated effort to achieve SLM at landscape scale then this will facilitate their participation in combating land degradation, and help overcome limitations in government capacity
- If more resilient and sustainable livelihoods can be facilitated for local communities, then this and other incentives will help deliver the desired behavior shifts and uptake in SLM (approaches may fail without this)
- If awareness is raised of the impacts of land degradation on ecosystem services and biodiversity, communities and the private sector will be more likely to support government efforts to tackle land degradation
- If knowledge and best practices are shared between communities, between states and with other SIDS then successful approaches will be upscaled more effectively and rapidly.



The theory of change has led to the formulation of four project Components that will work in synergy to: (i) strengthen the strategic (institutional, policy, regulatory) framework for addressing land degradation; (ii) improve the information, decision/support tools and capacity for addressing land degradation; (iii) demonstrate climate-smart sustainable land management in critical landscapes and coastal zones to improve ecosystem services and reduce land degradation; (iv) ensure effective knowledge management, gender mainstreaming, and M&E.

Explicit assumptions will need to be met in order to achieve the intended results, including: a) that national and state Governments maintain political and institutional support and the necessary co-financing to strengthen the enabling environment to deliver Components 1 and 2; b) that customary land tenure and/or conflicts between government and communities (or between communities themselves) do not prevent the implementation of landscape scale approaches to achieving LDN which is a precondition for delivering Component 3; c) additionally for Component 3, that improved livelihoods potential and

other incentives can be facilitated to increase community support for SLM; d) that improved knowledge management supported by adaptive management, M&E and gender mainstreaming will increase capacity and resilience and therefore lead to enhanced sustainability and up-scaling of project outcomes which is necessary to deliver Component 4; and finally e) that the project is managed effectively.

Component 1: Strengthening the strategic (institutional, policy, regulatory) framework for addressing land degradation

1.1 National Action Programme (NAP) for combating land degradation prepared for adoption by Government, incorporating indicators, targets and priority actions for achieving Land Degradation Neutrality (LDN) across each State, with support for mainstreaming into priority policies. The project will support the preparation and approval of FSM's first National Action Programme (NAP) for combating land degradation – a priority for government and key requirement under the UNCCD. This will be achieved through facilitation of a national-state intersectoral working group established for this purpose under the President's Council on Climate Change and Sustainable Development (PCCC&SD) (see Output 1.4). The NAP will incorporate strategies, indicators, and targets for achieving LDN (the over-arching principle of the UNCCD) that deliver multiple environmental, economic, and social benefits through avoiding, reducing, and reversing land degradation to deliver improved ecosystem services using best practice guidance from STAP[98] and FAO (for SIDS)[99]. It will integrate LDN planning and implementation with other relevant processes while minimizing trade-offs and unintended adverse impacts. The project will support each State, through existing inter-sectoral working groups to prepare a prioritized action plan for achieving LDN by 2030 to be included with the NAP for implementation. These integrated actions across all land-use types will include measures to: a) avoid future land degradation; b) reduce land degradation through promoting more sustainable agriculture and infrastructure; c) reverse existing land degradation by rehabilitating degraded areas. The NAP and resulting plans will be used to identify and target potential LDN funding frameworks for LDN transformative projects and programmes to support the states in combating land degradation[100]. Preparation of the NAP should involve all relevant stakeholders and sectors at each level, including scientists, policy makers, practitioners, and civil society representatives.

Support will also be provided to the PCCC&SD and to relevant sectoral departments of national and state governments to foster policy coherence by mainstreaming the SLM/LDN approaches and targets into overarching national and state development policies as these come up for review, so as to guide the implementation of transformative projects and programmes. Priority high-level policies for consideration would include the FSM Strategic Development Plan and state development plans, the Integrated Disaster Risk Management and Climate Change Policy and Joint State Action Plans, the National Biodiversity Strategy and Action Plan (NBSAP) and state BSAPs as well as Agriculture and Forestry sectoral policies. Priorities will be confirmed during the PPG when more information will be available on which of these policies will be reviewed during the project implementation period.

1.2. Priority gaps and weaknesses in the regulatory framework and enforcement mechanisms for combatting land degradation identified, and improvements achieved through technical support and advocacy leading to adoption by state and national governments. During the PPG, a review (desk study and consultations) will be initiated of existing national, state and municipal laws, regulations, ordinances and standards for combatting land degradation and mainstreaming SLM and biodiversity into the agriculture and infrastructure sectors to identify good practices and gaps. This will be finalised and published during Year 1 of implementation identifying the top priorities for gap-filling. The project will then share best practice materials with the states and provide technical and advocacy support to address the priority gaps through updating of existing, or drafting of new, regulations and standards (for subsequent

approval by governments[101]). Priorities for updating / strengthening or development of laws and regulations to prevent land degradation identified at PIF stage vary between the states but include: mangrove and watershed protection/moratorium (needed for 3 states); anti-pollution, solid and septic waste and anti-littering; soil/earth removal; infrastructure development and sand dredging / coral mining; strengthen EIA regulations and establish coordinated project review process; research permit regulation; zoning. The regulatory priorities to be addressed will be informed by the robust and comprehensive LDN target setting process and resilience assessments under Outputs 2.1 and 2,2, which would include assessments of LD and therefore determine what solutions are appropriate.

The above review and strengthening process will also address responsibilities for, and effectiveness of, enforcement of legislation and standards relating to land degradation and will provide detailed recommendations and support for strengthening enforcement including by: a) clarifying roles and responsibilities of relevant agencies; b) promoting establishment of a joint enforcement agreement between National, State and local governments (including EPAs); c) establishing a harmonized approach to on-line state-level reporting of enforcement; d) considering options for establishment of Environmental Courts; e) reviewing penalties; f) raising public awareness; and g) exploring other mechanisms (e.g. offsets) to mitigate the impacts of land degradation.

1.3 State level land use plans and local management plans on the high islands strengthened with enhanced implementation to avoid, reduce and reverse land degradation and conserve biodiversity. This Output will support strengthening and implementation of existing land use plans as well as local management plans for the high islands to address land degradation. State level land use plans exist for only two States (the Pohnpei Integrated Environmental Management Plan and the Kosrae Land Use Plan), whereas several local, community-based management plans exist for all the high islands (e.g. forest stewardship, watershed and mangrove management plans, municipality plans etc.). The main challenge is the slow implementation of these plans due to lack of resources and capacity. The development of new plans is therefore not a priority, and indeed can be a very slow process due to land tenure issues. During the PPG, a review of these plans will be undertaken to identify the priority actions that could contribute to the LDN targets and response hierarchy (Avoid > Reduce > Reverse land degradation). These will be included in the project in line with the targets for achieving land degradation neutrality under Output 2.1, and the state-level NAP implementation plans (Output 1.1). Detailed implementation measures will be designed with the relevant stakeholders (state agencies, municipalities, community groups and the private sector), and the project will then provide technical and financial assistance to support their implementation through SLM interventions building from the demonstration activities in Component 3. Interventions should consider land potential, land condition, ecosystem services, resilience, social, cultural and economic factors, and should be targeted so that gains at least balance losses from land degradation within the same land type to achieve neutrality or improvement, ensuring that counter-balancing measures do not diminish the wellbeing of land users. Initiatives to develop any other new land use or management plans by the States during the project implementation period will be assessed during the PPG to determine whether there are further opportunities for LD and BD mainstreaming (e.g. Chuuk: Sustainable Land Management Plan; Kosrae: watershed plans, Tofol Area Master Plan; Pohnpei: State Development Plan; Yap: watershed plans).

1.4 Existing/nascent state level intersectoral working groups for landscape management fostered and operationalised to address land degradation, and national level intersectoral working group established and supported to oversee formulation and mainstreaming of the NAP, both with engagement of the private sector. The project will support and further strengthen the operation of existing/nascent state working groups that have responsibility for tackling cross-sectoral issues for improved landscape management, as a mechanism for mainstreaming SLM and biodiversity. These are: the Chuuk State Environmental Working Group (SEWG); Kosrae Resource Management Committee; Pohnpei Resource Management Committee; and the Yap Environmental

Stewardship Consortium (ESC). The project will support these working groups to develop and drive implementation of the state-level action plans for achieving LDN (developed under Output 1.1). This will include: pursuing improved institutional mechanisms (ideally a single agency for planning, coordination and M&E of the plan with other partner support); joint enforcement and monitoring, engagement of the private sector through public private partnerships, SLM improvements in the agriculture and infrastructure sectors and solid waste management (through composting, and reducing waste disposal in critical areas). The project will also seek to enhance coordination at national level on land degradation between sectors through supporting the President's Council on Climate Change and Sustainable Development to establish a cross-sectoral national/state LDN/SLM working group to oversee NAP development, LDN target setting and identification of strategic LDN interventions (Output 1.1). The project will provide technical support to this group for consensus-building on policy actions and investments for achieving LDN and strengthen institutional mechanisms for enforcement and reporting (e.g., through joint enforcement agreements (national, state and local governments, including EPAs) proposed under Output 1.2. Participation of women and private sector representatives will be strongly encourage for both national and state level groups.

Component 2: Enhancing information, decision/support tools and capacity for addressing land degradation

2.1 National level spatial mapping and strengthened baseline information available to states on existing platforms to assess trends, drivers and hotspots of land degradation, and targets set for the LDN sub-indicators. Achieving LDN requires estimating the expected cumulative impacts of land use and land management decisions, and counter-balancing anticipated losses through strategically planned rehabilitation or restoration of degraded land, within the same land type. The project will follow the UNCCD's Conceptual Framework for Land Degradation Neutrality[102] which provides a scientifically-sound basis for understanding and implementing LDN and informing the development of practical guidance for pursuing LDN and monitoring achievement of LDN. Access to up-to date high-resolution satellite imagery will be required to link with other spatial and non-spatial information (topography, forest/vegetation cover, hydrology, soils, land use, slope, population, agricultural production etc.) to set the baseline and targets for the LDN sub-indicators (These are: a) trends in land cover; b) trends in land productivity or functioning of the land; and c) trends in carbon stock above and below ground). During the PPG, the project will consult representatives of the GIS Unit of DECEM, FSM R&D and GIS specialists from each state to assess needs and will support the purchase of recent satellite imagery as required. This will enable the baseline year and values for the core LDN indicators to be set, along with the 2030 LDN targets for achieving neutrality. Maps for the LDN indicator baselines and other relevant spatial data will be uploaded to the existing Digital Atlas of Micronesia[103] which is funded by DECEM as part of their co-financing. Support will be provided to each state to identify the SLM measures required to meet those targets. Regular monitoring of the global (at approximately 4-year intervals) and local indicators will be supported to track changes relative to the baseline value for each land unit, and the results will be published. Local knowledge, citizen science and other data will help verify and interpret the monitoring data. The LDN/SLM knowledge management portal (Output 4.2) will be populated with the required information for sharing and verification of monitoring data on the LDN indicators, particularly to assist the states. Collaboration will be promoted with the Group on Earth Observations (GEO) Initiative[104] on LDN, as well as the IUCN/GEF Target Setting Programme on LDN[105] for technical assistance with setting LDN baselines, targets, monitoring and reporting land degradation. This will ensure that methods are compatible/equivalent with the work undertaken by UNCCD and the Global Mechanism through the LDN Target Setting Programme, and that the format and software will be compatible for the next reporting cycle using PRAIS and eventually Earth.Trend.

2.2 Resilience assessments of landscapes, habitats and land uses to land degradation and climate-induced risks to support planning and zoning. This output will build on previously conducted large-scale assessments of resilience and vulnerability to land degradation such as those presented in the Forest Action Plan 2020-2030 and FSM State of Environment Report 2018, and the planned assessments on climate change vulnerability to be undertaken by the recently approved GCF/MCT Food Security project. The GEF funds will build from and complement these initiatives, using the results of the baseline assessments of the three LDN sub-indicators and the 'resilience assessment' approach of the UNCCD Scientific Conceptual Framework for LDN and tools such as the Resilience, Adaptation Pathways and Transformation Assessment (RAPTA) framework and the Self-evaluation and Holistic Assessment of climate Resilience of farmers and Pastoralists (SHARP). The work will be conducted in close cooperation with the GCF project (areas of cooperation to be established during the PPG) to support the states to make more detailed evidence-based assessment of landscapes, habitats and land uses that are particularly exposed to land degradation, identifying land degradation hotspots by comparing the LDN baseline assessment with the spatial changes over a period of 10-15 years to assess rates and intensity of change. Priorities will differ between the States but will include: watershed assessments/mapping of forest loss, soil erosion and landslide vulnerability (Chuuk, Kosrae, Pohnpei); Coastal vulnerability inundation assessment to sea level intrusion (Kosrae, Yap); Mangrove vulnerability assessment (all states except Pohnpei); Dredging, land reclamation and landfill survey (Kosrae, Pohnpei); Water quality vulnerability assessment (Pohnpei). All states have identified the need for more accurate and recent Digital Elevation Modelling (DEM) for GIS using drones and LIDAR imagery. Options to assist with this either through contracting specialist surveys or supporting the acquisition of drones will be further explored during the PPG.

These detailed assessments will help to determine the causal chains / drivers of land degradation in the degraded areas (hotspots) and their impacts on ecosystem services, so that appropriate measures are incorporated into the NAP (Output 1.1) and landscape level plans to address land degradation (Output 1.3). Examples might include: a) targeting areas for movement of piggeries away from watercourses and promoting the use of dry litter piggeries; or b) reducing the reliance on coral for construction by using land-mined aggregate instead (identifying sources of land rocks that can be quarried will require careful EIA), or by increasing the cost of coral materials to make it cost prohibitive.

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2.3 Protocols for monitoring land degradation and practical guidelines for promoting/mainstreaming SLM/BD in the agriculture and infrastructure sectors. During the PPG, a review of existing state and national-level protocols for monitoring land degradation and technical guidelines and handbooks for promoting SLM will be undertaken to identify best practice materials that could be shared (also from other SIDS) to assist the states in addressing land degradation. Key gaps in each state will be identified and a prioritized gap-filling plan will be developed for implementation by the project. Already at PIF stage the following priority needs were identified: a) Protocols: Protocols for monitoring the three LDN global indicators for assessing and monitoring LDN based on global best practices including identifying data sources, frequency of monitoring etc.; Water testing protocols; Protocol for earth moving, including checklist, permit conditions and land use application form; Protocols for reducing the impact of coral/sand dredging (e.g. requiring use of silt curtains); Protocol for climate-proofed roads and banks which ensure critical hydrological flows in the freshwater/ saltwater interface. b) Guidelines: Coastal/beach strand rehabilitation guideline; riparian habitats management/rehabilitation guideline; Mangrove/wetland rehabilitation guideline, Forest rehabilitation guideline; Composting guideline; Strengthened EIA guidelines including robust monitoring and evaluation. c) Guidebooks: Guidebook for farmers on SLM traditional agroforestry and climate-smart practices (with GCF project); Guidebook on smallholder farm business development (diversification, food processing and value-addition); Guidebook on SLM best practices in the infrastructure sector; Once a prioritized list has been finalised, the project will work with specialists and local practitioners to develop, disseminate and promote these materials with the relevant stakeholders including through capacity development (Output 2.4) and knowledge sharing (Output 4.2).

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2.4 Capacity building for government officers, extension staff, community groups, NGOs etc.), plus technology transfer and equipment for LDN monitoring and mainstreaming of SLM/BD ensuring that training and extension programs are gender-focused and gender-responsive. During the PPG, a capacity and core functional assessment of the state and national government departments and extension services concerned with SLM will be conducted to identify training needs and any required improvements to operational roles for achieving LDN. This assessment will be used to formulate a detailed capacity building plan for mainstreaming SLM/BD and achieving LDN for implementation during the project.

Training will be provided to key state and national level stakeholders on the principles and stepwise approaches for planning and achieving LDN to ensure that adequate human-resource skills are in place in priority sectors. This will include training for monitoring the standard LDN indicators and progress towards LDN (e.g., at 5-year intervals) and for reporting on the LDN status at the global level by 2030 (i.e. SDG 15.3.1 - “Proportion of land that is degraded over total land area”).

GIS units at both state and national level will be provided with detailed training to enable full functional efficiency to support planning and monitoring of land degradation and sharing of information through the national level information portal (Output 4.2). The PPG assessment will also identify priority gaps in hardware or software including on-line apps such as Collect Earth and Trends. Earth, geo-database development, etc. to assist analysis of land degradation and trends. States have identified the potential need for drones (and UAV training), GPS and land survey equipment, and these will be assessed during the PPG in relation to available budgets.

Extension service providers (government and COM) and active NGOs will be trained in participatory methods to build local capacity for SLM. This will focus on aspects of traditional agroforestry and related improvements, plus increasing the technical, management, and marketing skills of farmers, state farmer associations and small agribusiness enterprises for innovation and added-value product development (see Output 3.3). Support will be given to improve the coordination and partnership between extension providers to enhance the efficiency of extension provision as called for in the Agriculture policy.

Based on the assessment of gaps conducted during the PPG, targeted technical training courses will be led by relevant experts to build the capacity of communities, government and the private sector stakeholders in both the agriculture and infrastructure sectors to implement SLM. This will include some generic training such as enhancing capacity for conducting EIA and preparing environmental impact statements (e.g., for dredging sites), training in laws and enforcement and building capacity for nature-based versus engineered solutions for land degradation. Specific technical training will be provided on the demonstration activities to be conducted under Component 3 for reducing and reversing land degradation. Priorities requested by the States for Output 3.1 and 3.2 include: appropriate soil erosion control measures, wildfire suppression and equipment, riparian buffer management, mangrove and wetland rehabilitation, providing training to the infrastructure sector to reduce the impacts of road construction, rip-rap and revetments on degraded coasts, sand dredging and coral mining by promoting more sustainable technologies (options to be assessed during the PPG in consultation with the state EPAs identifying the key public sector institutions and private sector corporations to be targeted). Priorities for Output 3.3 on sustainable climate resilient agriculture include: soil fertility training (composting / green waste recycling including provision of equipment (e.g., wood chippers), soil pH training for farmers, climate resilient crops, integrated pest management (plus pesticide training of trainers with certification); water quality monitoring and provision of equipment).

Component 3: Embedding climate-smart sustainable land management in critical landscapes and coastal zones (demonstration activities)

This component will focus on integrated planning and delivery of measures to achieve LDN through demonstrating approaches for SLM and biodiversity conservation across 3,367 ha in four landscapes (one per state) representative of the terrestrial, coastal and agro-ecosystems of the FSM. The indicative landscapes are:

1. Gagil-Tomil Island Northern Road Improvement Project in Yap state (986 ha)
2. Wichen River, Weno Island in Chuuk state (233 ha)
3. Pehleng Demonstration Landscape in Pohnpei state (885 ha)
4. Tofol and Innem Watershed in Kosrae state (1,263 ha)

Annex A provides the draft selection criteria, an overview map and brief detail on each of these indicative landscapes. GEF investments for land degradation and biodiversity will apply across all four landscapes. These areas are indicative and final landscapes will be confirmed and delineated during the PPG phase based on detailed application of the selection criteria, with proposed activities identified in full consultation with local communities and stakeholders.

The three outputs of this component will bring together best practices from traditional knowledge, previous projects in the FSM and from international experiences to address the threats from land degradation in an integrated way across these four landscapes.

3.1 Community-led participatory integrated landscape management and rehabilitation plans co-designed, agreed and implemented to avoid, reduce and reverse land degradation, to protect ecosystem services and biodiversity. Planning will focus on integrating LDN principles and measures into plans where they already exist or establishing new plans. The goal is to achieve a mosaic of zoned land uses across the landscape that ensure that the land resource base is used for the purposes to which it is best-suited, so that it can continue to supply ecosystem services and biodiversity such as provision of food and regulation of water and climate, while enhancing the resilience of the communities that depend on it. This will include measures to avoid further land degradation, and to reduce and reverse existing land degradation through the measures outlined for Outputs 3.2 and 3.3 – thereby meeting the goal of LDN.

Following GEF-STAP's guidance on LDN[106], the detailed community-driven planning will build on assessments initiated during the PPG for each landscape to: a) characterise the system through a participatory process with key stakeholders (especially land users); b) describe the key biophysical and socio-economic features of the system including its boundary delineation, ecosystem services and ecological functions; c) identify what forms of land degradation are affecting productivity and natural ecosystems (e.g. soil erosion including loss of topsoil, gullying, pollution, loss of soil fertility, coastal inundation, sedimentation); d) identify the drivers of land degradation (e.g. drought, migration, market forces), and the pressures and unsustainable land use practices (e.g. forest conversion to agriculture, poorly planned development, infrastructure (e.g. roads), extraction of natural resources). The priority areas to avoid (i.e., no-go areas), reduce (i.e. SLM areas to be addressed by Output 3.3) and reverse (i.e. areas to be rehabilitated through Output 3.2) land degradation will be accurately mapped, zoned and prioritized. Finally, a simple and costed plan will be prepared and approved for implementing actions towards achieving LDN identifying delivery mechanisms and partners.

Each plan will be developed and overseen by an appropriate multistakeholder local coordination committee with clear TOR, representing the key stakeholders (e.g. community groups, smallholder farmers, state/municipal government, private sector) who will coordinate implementation, monitor progress and ensure review and adaptive management, reinforcing responsible governance, accountability and transparency according to local and traditional norms as well as protecting human rights, including tenure rights.

3.2 Targeted ecosystem rehabilitation (nature-based solutions) demonstrated in innovative partnerships with community and the private sector in degraded watersheds and coastal zones to reduce and reverse land degradation and enhance biodiversity. This output will focus on implementation of well-designed, climate-smart nature-based solutions identified under Output 3.1 to reduce and reverse land degradation across the demonstration landscapes including: a) rehabilitation of degraded native forests in critical watersheds through implementation of community reforestation / tree planting projects including fire breaks where necessary; b) rehabilitation of riparian corridors including vegetated buffer strips and setbacks for piggeries and waste disposal in landowner management plans to improve water quality; c) rehabilitation of strand forest / green belt to stabilize and reduce coastal erosion; d) rehabilitation and conservation of mangrove forests mitigating climate change and coastal degradation following the principles of ecological mangrove restoration[107] where possible encouraging natural restoration resulting in better survival rates, faster growth, and a more diverse, resilient forest; e) rehabilitation/conservation of freshwater wetlands and traditional taro patch systems by raising water levels to prevent saltwater intrusion; f) community-led rehabilitation of formerly productive land degraded by infrastructure development (e.g. small-scale land levelling and replanting with native vegetation etc., where appropriate with support of private sector partners[108]. To implement these innovative rehabilitation projects, small grants and technical support will be provided to community/landowner groups. This will include providing support for community tree nurseries that can provide planting materials both for the rehabilitation of natural habitats, but also for sustainable agroforestry (see next Output). Particular effort will be made to engage and train women and unemployed youth to implement rehabilitation projects, to raise their environmental awareness and future employment prospects and provide certificates for skills learned. These nature-based solutions are expected to simultaneously deliver benefits for SLM, climate change, biodiversity and livelihoods.

3.3 Smallholder farmers on traditionally owned lands supported to implement traditional and innovative climate-smart agricultural practices for sustainable land management and climate change adaptation that contribute to LDN, protect ecosystem services, biodiversity and food security and enhance incomes. This output will be delivered in close collaboration with the recently approved GCF/MCT project on food security. It will support, promote and improve the traditional agroforestry system by working with the College of Micronesia (COM) extension programmes to transfer climate-smart agricultural practices, building on successful experiences such as Yap's Climate Adaptive Agriculture and Resilience project, supported by USAID's Pacific-American Climate Fund. It will support landowners and communities to prevent and reverse land degradation through demonstration and up-scaling of environmentally friendly organic food production systems that protect soils, water and forest cover and provide fresh healthy local foods. A key priority will be to address declining soil fertility by developing composting systems for agricultural and other biodegradable waste for groups of farms, and also at larger scale for Municipalities (potential job creation). Integrated soil fertility management approaches including composting and mulching will help farmers to reduce use of inorganic fertilisers (and related costs) and will also reduce the problem of solid waste management by avoiding biodegradable materials going to litter or landfill. More sustainable and profitable livestock management practices will also be promoted including dry litter piggeries and proper treatment of livestock manure and wastewater as a key priority for avoiding pollution of watercourses. The use of simple farm-level biogas plants using pig manure to produce gas for cooking and liquid

waste for composting/fertilisers, which has been successfully piloted in Pohnpei, will be replicated. Other aspects to be promoted will include: integrated crop management (introducing vegetable production into agroforestry systems, cover-cropping; yam trellis system (Pohnpei), sustainable taro patch culture to avoid drainage of peat soils in low lying areas); and integrated pest management and reduction in use and safe storage/disposal of agrochemicals, oil etc.

Extension programmes developed with COM will train farmers and farming associations in “farming as a business” with the aim of increasing profitability and creating jobs (particularly for women and youth) focusing on value-added marketable products from sustainable agroforestry. This will include low-cost processing to reduce perishability and increase farm gate prices and targeting off-season production for different commodities in order to avoid over-supply and low seasonal prices. There are many opportunities for development of new island products and existing or new local markets for traditional, healthy local foods. FSM has a long list of island farm produce (breadfruits, bananas, taros, yams, black pepper, citrus, sakau, betel nuts, coconuts etc.) with business potential, but lacks capacity to turn them into business commodities. Livestock production could also be improved through enhanced genetic stock. The project will work with NGOs such as the Island Food Community of Pohnpei (IFCP) and their "Go Local" campaign for promoting local food for its "CHEEF" benefits (Culture, Health, Environment, Economy and Food security). IFCP are currently using this to promote a local flour made from breadfruit, taro and bananas which could be produced and marketed across the states. The aim will be to identify with marketeers at least 4 such products (1 per state) to sustain profitable and sustainable local added value businesses (initial scoping of potential products during the PPG). Activities will cover the full spectrum of business incubation support: selection of a resource person or NGO to lead product identification, training (with COM and private sector organisations), market assessment, product preparation, quality control, packaging, labelling, pricing and monitoring (all with NGO, private sector and existing marketer support to share appropriate expertise/knowledge). Farmers will focus on quality production for value addition and potentially for direct marketing. Because of high transport costs, the primary focus will be on local markets; however, opportunities will also be made to identify and develop potential high-value agricultural commodities and products for the export market. During the PPG, opportunities to engage with and up-scale the Participant Guarantee Systems farmers groups program[109] (a locally focused quality assurance system) being piloted with the Vital funded Coconut for Life project and the FSM GCF Food Security Project will be explored. Support will be provided to improve access to small grants, credit (micro-finance) and savings facilities for farm business and product development. During the PPG the option of replicating Pohnpei’s Agriculture revolving fund (a successful small fund (US$50K) to help farmers purchase essential inputs and hire centralised small farm machinery/equipment at cost (e.g. wood chippers) will be investigated.

Subject to emergence from the global COVID-19 pandemic and recovery of the tourism sector in the FSM, the project will explore and support opportunities to improve access of small-scale sustainable producers to the tourism market for quality local produce, and diversification into agri-tours, handicrafts and farm-stays. This will be achieved in close cooperation with tourism associations and local tourism providers.

Component 4: Effective knowledge management, gender mainstreaming, and M&E

4.1 Awareness-raising programme on SLM and the benefits of tackling land degradation delivered through targeted communications, education, campaigns and community participation. Considerable effort is required to raise awareness of the links between land degradation, the loss of ecosystem services/biodiversity and impacts on health, wellbeing and resilience – both for the public, decision-makers and the private sector. This is a high priority for all four states and for local municipalities, particularly concerning watersheds and critical coastal habitats (particularly mangroves). In line with the recommendation of the GEF5 MTR, a communications coordinator will be hired within the PIU to design and oversee implementation of an integrated communications/outreach plan that will focus on raising awareness of approaches to LDN and SLM/BD solutions to avoid, reduce or reverse unsustainable practices in the face of climate change; awareness will also be raised about existing and new policies, regulations and codes - and the penalties for violating

them. The project's communication plan should be designed to disseminate project results and best practices to segmented target audiences in easily understood formats, using virtual tools such as text messaging, social media and the project and state web portals, quarterly newsletters, posters, videos, radio/TV and community hearings. Working with NGOs, outreach programmes will be established to communicate results with school children via school visits (e.g., Conservation Society of Pohnpei's Green Road Show), developing their environment clubs, booklets, comics, colouring books, competitions on SLM etc. Much can be achieved by engaging local NGOs, women's organizations, farmer's associations, and youth clubs in SLM activities, so they become a voice for SLM and watchdogs for land degradation and the project will provide these organisations with the necessary support and training. Environmental citizen science and volunteering programmes will also be facilitated through NGOs to promote greater participation.

4.2 Knowledge management platform and programme to share information and project lessons between states, landscapes and communities including through an on-line portal, learning exchanges and demonstration farms/farmer associations. This Output will support all other outputs to promote vertical and horizontal learning, knowledge-sharing and upscaling of project results. It will support the development of a national level LDN/SLM on-line portal (as part of DECEM's existing portals) for use by each state and nationally, to ensure availability and use of key documents, GIS and remote sensing imagery and information for use in research, evidence-based approaches, monitoring, and outreach activities, including the LDN indicators. The project will also support knowledge exchange on the ground through learning exchanges between government offices, communities and municipalities, exchange visits, hands-on workshops. Demonstration farms, farmer associations and producer groups will be used as key mechanisms for sharing knowledge on best sustainable agriculture practices and ensuring regular dialogue between stakeholders in the priority supply chains for SLM products. On-line events will be held to share experiences between states, and nationally. Best practices, including indigenous/traditional knowledge and skills on SLM and related livelihoods opportunities will be documented and shared. The project will also identify and support (through leadership development programmes) champions in the farming community who can be ambassadors for LDN/SLM and biodiversity and help to support community partnership building, peer-to-peer learning, sharing success stories, best practices, and improving awareness.

4.3 Best practices and lessons learned for addressing land degradation exchanged through South-South cooperation with other SIDS across the Pacific and elsewhere to support LDN/SLM. The proposed project will provide opportunities to policy makers and practitioners to improve their skills in tackling land degradation by enabling shared learning with experiences and examples from other SIDS (particularly in the Pacific), including through: a) the UNCCD Knowledge Hub[110] and LDN knowledge e-platform; b) the Partnership Initiative on Sustainable Land Management (Caribbean)[111]; c) the Pacific Islands Managed and Protected Areas Community (PIMPAC) network; d) the Micronesians in Island Conservation (MIC) peer-learning network for conservation leaders; e) other programmes of SPREP and the Pacific Community (SPC) including the latter's Atoll Centre of Excellence for Sustainable Agriculture which is developing ways to increase crop production, improve marketing opportunities and raise local incomes based on community-driven land-use planning. These opportunities will be realized mainly remotely (to minimize costs) through on-line webinars, workshops and forums, social media networks, sharing of best practice materials; where significant benefits can be identified (e.g., for youth champions) international exchanges within the Pacific may be supported. A small challenge grant will be made available for international scholarship programs (MSc level) for environment-related fields related to the project objective.

4.4 Project M&E, safeguards and gender mainstreaming to support effective project management and maximize project impact. A continuous learning approach, using monitoring and evaluation as key tools for adaptive management will be applied to maximise the project outcomes for SLM, BD and LDN. Annual work plans and project implementation reports will be used to adjust implementation based on progress towards results, supported by an external

mid-term review. The project will strive for equal representation and participation of both women and men in every phase and aspect of implementation: recruitment of staff and consultants, composition of committees, trainers and trainees, community beneficiaries. Specific indicators will be finalised during the PPG to track progress. Women's leadership will be supported throughout the project. The demonstration activities under Component 3 will prioritise the proactive participation of women, youth, and disadvantaged groups in all aspects to improve equality. This will be achieved through engaging with and supporting existing activities and networks such as Women in Farming, International Women's Day and Youth for Change (Climate Change).

4) Alignment with GEF focal area and/or Impact Program strategies

Through its objective of securing the FSM's critical ecosystem services through climate-resilient sustainable land and coastal management contributing to land degradation neutrality, this proposed project is aligned with the GEF-7 Land Degradation and Biodiversity focal area objectives as follows:

· *LD1-1 Maintain or improve flow of agro-ecosystem services to sustain food production and livelihoods through Sustainable Land Management.* Under Component 3 and supported by the enabling framework of Components 1 and 2, the project will focus on smallholder farms (production landscapes) that sustain up to 90% of households, where agricultural management practices underpin the livelihoods of rural farmers. The project will include support for improved access to technical assistance and finance for smallholders to implement innovative agricultural practices for sustainable land management that achieve LDN, protect ecosystem services, and improve profitability (improved profitability will be used as an indicator of project success). Project SLM interventions will target the drivers of land degradation within a framework of integrated community planning, governance and management at landscape scale. Upscaling will be achieved through agricultural training and extension programmes and sharing of successful interventions through community exchanges and visits (Component 4). Strategies pursued with the private sector will target SMEs that are promoting innovations in agriculture and livestock production systems and improved access to markets including in the tourism sector, as well as improvements in the environmental performance of the infrastructure sector.

· *LD-2-5 Create enabling environments to support scaling up and mainstreaming of SLM and LDN*. The STAP LDN Guidelines for GEF projects[112] have been used to inform the development of this PIF and will be used during the PPG phase to inform preliminary assessments and the detailed design of project activities. Key modules of the guidance have been captured within project outputs at PIF stage, e.g. building participatory multi-sector coordination around LDN goals, objectives and interventions, integration with existing land use planning processes and systems for better monitoring LDN progress. Through Component 1, the proposed project contributes to this focal area objective by putting in place a coordination platform for promoting LDN and mainstreaming SLM in the FSM and will lay the groundwork for LDN target setting. Project activities will be designed in close alignment with the UNCCD Scientific-Conceptual Framework for Land Degradation Neutrality and as summarized in the Checklist for Land Degradation Neutrality Transformative Projects and Programmes (LDN TPP). This will be supported through strengthening and updating the national and state level legal, policy and land use planning frameworks for SLM/LDN. Technical guidelines for LDN and SLM best practices including climate smart SLM agriculture and livestock systems for rural communities, and well as for infrastructure development and operation will be prepared to support upscaling across States and communities, supported by appropriate training of extension officers.

· *BD-1-1 Mainstream biodiversity across sectors as well as landscapes and seascapes through biodiversity mainstreaming in priority sectors*. The project contributes to this focal area objective by: a) supporting government to mainstream the conservation of biodiversity into priority sectors (particularly agriculture and infrastructure) through improved policies and plans, inter-sectoral governance and information management within the framework of the NBSAP; b) mainstreaming biodiversity into these sectors through better regulations and standards, sharing of information and improved tools for decision-

making, technical capacity building; and c) demonstration and knowledge sharing of improved landscape and coastal zone management to be more biodiversity-positive by reducing the impacts of land degradation, with a focus on working with communities to make agroforestry livelihoods more resilient and deliver new income while also contributing to SLM and biodiversity conservation.

5) incremental/additional cost reasoning and expected contributions from the baseline, the GEFTF, LDCF, SCCF, and co-financing:

Baseline	Alternative to be put in place	Project impact including GEBs
Strategic enabling framework and capacity for addressing land degradation		
Absence of national / state level strategic framework for tackling land degradation, with clear indicators, targets and monitoring, and lack of integration of SLM/BD and LDN targets and approaches into policies plans and practices.	FSM's first National Action Programme (NAP) for combating land degradation incorporating strategies, indicators and targets for achieving LDN, with mainstreaming into national/state and sectoral policies, programmes and plans, including state-level land use plans	Government effort to address land degradation is focused on achieving LDN, and mainstreamed both vertically and horizontally, including through land use plans
Key laws for SLM and BD are in place, but there is great variation between the states in the extent to which these have been transposed into regulations and are being enforced effectively.	Enhanced regulations covering activities causing land degradation, and better enforcement including through joint enforcement agreements.	Reduction in inappropriate and illegal activities causing land degradation
A number of governmental agencies are managing programmes with implications for land degradation; poor coordination means that the limited available resources are inefficiently used.	Enhanced intersectoral coordination in place at national and state levels to tackle land degradation	Joint or more harmonized approaches to addressing land degradation and more efficient use of resources.
Lack of capacity across government and its extension services (COM-FSM), the private sector and in communities for addressing land degradation and promoting SLM will continue to hamper progress.	Capacity for addressing land degradation is raised at all levels, particularly in the extension services	Improved capacity for LDN and SLM/BD,
Government lacks the information and tools to tackle land degradation there is inadequate knowledge sharing	Improved information, mapping asses	Greater and more effective targ

	sments and guidance tools for tacklin g land degradation, with wide knowled ge sharing	eting of efforts to tackle land de gradation and ability to monitor outcomes.
Community-based, climate-smart sustainable land management in critical landscapes		
Degradation of land and water resources will increase, ecosystem services, biodiv ersity and livelihoods will be impacted, an d land degradation neutrality will not be a chieved because of ongoing: - agricultural encroachment into natural e cosystems including watershed forests a nd wetlands - loss of soil nutrients and health from s mallholder agroforestry farms because o f poor agroforestry practices, causing fur ther pressure on land resources - damage to water quality in rivers and co astal habitats arising from pollution of rip arian land (piggeries and waste) - Damage to multiple ecosystem services and livelihoods arising from poorly locate d, planned or executed infrastructure proj ects, such as roads or dredging.	Community-based landscape-level pla ns developed and implemented at eco system scale to demonstrate SLM, by: - Avoiding agricultural encroachment i n watersheds and wetlands (zoning, e nforcement, improved livelihoods) and rehabilitate forests - promoting sustainable agroforestry a nd improving soil and water conservat ion by traditional and contemporary g ood practices - reducing pollution into watercourses by moving and upgrading piggeries, cr eating buffer zones and removing was te - avoiding and reducing the impacts of inappropriate infrastructure developm ent	Improved management of 3,367 ha of priority landscapes, includ ing forested, agricultural and ins hore coastal ecosystems leadin g towards achievement of LDN i n demonstration landscapes 985 ha of habitat important for critical ecosystem services and biodiversity restored / rehabilita ted including forested watershe d and riparian zones, and coast al habitats 6,342 ha of critical landscapes across 4 states under sustainab le land management in producti on systems; 722ha of terrestrial land enhanced for biodiversity a nd 580 ha of marine areas unde r improved management Direct carbon sequestration ben efits estimated at 3,433 tCO2eq over a 20-year period, with indir ect benefits to flow from replica tion and policy uptake
Community wellbeing and livelihoods		
Rural communities suffering health, wellb eing and livelihoods challenges because of: - Limited engagement in sustainable land and forest management practices that pr	Communities participating in improve d management of landscapes using in digenous and contemporary knowledg e and best practices. Promotion and production of local foo	Communities engaged in and a ware of the benefits of SLM

and forest management practices that pr otect and enhance ecosystem services	Promotion and production of local foo d for its "CHEEF" benefits (Culture, He alth, Environment, Economy and Food security).	Greater community resilience to shocks
- Reduced resilience to external shocks in cluding natural disasters, pandemics, etc.	Business incubation support for susta inable agroforestry to assist emergen ce of green livelihoods that benefit ho usehold incomes, particularly for wom en and youth.	Improved diet and health (food security) of local population
- Poor access to quality locally grown hea lthy foods		
- Limited opportunities and ability for bus iness development based on smallholder agroforestry and therefore few incentives to improve production	Awareness raising of the benefits of S LM, BD and LDN	New sustainable businesses, jo bs and value-added products, le ading to 10% improvement in ho usehold profitability
- Low public awareness of the benefits of reducing land degradation to enhance ec osystem services means environmental quality continues to decline		Improved understanding and aw areness of the threats and risks posed by land degradation to ec osystem services.

6) Global environmental benefits (GEFTF) and/or adaptation benefits (LDCF/SCCF);

The project will reduce threats from land degradation across critical terrestrial and coastal landscapes of the FSM, demonstrating synergy between the goals and targets of UNCCD, CBD, UNFCCC and the Sustainable Development Goals (SDGs)[113]. By promoting the achievement of LDN the project will provide crucial support to meeting commitments under these conventions. The project will target land degradation neutrality and generate global environmental benefits for ecosystem services and biodiversity over 3,367 ha of forested, agricultural and coastal landscapes on the high islands of Chuuk, Kosrae, Pohnpei and Yap states. Additional benefits will be derived in downstream coastal zones and through mainstreaming SLM and BD at state and national levels. Integrated and inclusive ecosystem-based management will demonstrate how SLM contributes to more resilient and engaged communities, improved ecosystem services and biodiversity including climate change mitigation and adaptation co-benefits.

The project will reverse land degradation in critical watersheds and coastal ecosystems by targeting restoration measures over an estimated 985 ha of landscapes (Core indicator 3), and by bringing 722 ha of landscapes under improved management to benefit biodiversity and a further 6,342 ha in production systems under sustainable land management (Core indicator 4). In addition, a further 580 ha of inshore marine ecosystems will benefit from improved

management, particularly of upstream watersheds (Core indicator 5). A conservative estimate of 3,433 tCO2e greenhouse gas emissions will be mitigated (Core Indicator 6) through avoided forest degradation from expansion of agricultural areas and conversion of current unsustainable smallholder practices to SLM.

This project offers strong potential for climate change mitigation and adaptation co-benefits through nature-based solutions that lead to enhanced carbon sequestration in soils and forests and coastal ecosystems and improved protection from severe weather events as a result of habitat rehabilitation.

Project implementation will provide direct benefits to an estimated 4,842 people (50% female) primarily in the demonstration landscapes who depend on these landscapes for the rich ecosystem services they provide, but also including 222 representatives of state and national government organisations, the private sector and NGO/CSOs who will benefit from the project through improved capacity etc. Indirect benefits will flow to populations right across the high islands (an indicative 66,472 people at PIF stage, a majority of whom are expected to be engaged in agriculture). The project will demonstrate livelihood benefits for smallholder farmers in the demonstration landscapes (greater resilience and 10% improvement in household profitability) through reduction in input costs, enhanced income from added-value products and improved marketing and diversification, with the potential for wide replication. This will result in reduced conflicts within and between communities over natural resources and with the government and private sector, as well as reducing threats to biodiversity.

7) Innovation, sustainability and potential for scaling up

Innovation: The proposed project will for the first time in the FSM support a holistic approach to addressing the critical threat of land degradation, simultaneously integrating in one concerted approach the formulation of a National Action Program, LDN target setting, mainstreaming into sub-national plans and regulations, capacity and tools development, demonstration of SLM on the ground, awareness raising and knowledge sharing. This brings significant additionality from the GEF investment compared to any single investment in one of these activities. The project will also build on the lessons learned from the LDN target setting process in SIDS and provide a way forward for policy makers and stakeholders on future action to address land degradation. This will take into account cross-cutting issues and linkages between emerging and existing challenges and priorities, notably climate change, biodiversity recovery and building-back from the impacts of COVID-19. Demonstration of nature-based solutions to rehabilitate degraded watersheds, rivers and coastal zones will use innovative partnerships between government, community and the private sector to deliver multiple benefits including livelihoods, biodiversity and food security (e.g. mangrove, reef and lagoon restoration to protect from storms and improve fisheries, riparian buffers and rehabilitated/created wetlands for water purification, strategic forest rehabilitation to reduce erosion and flood risk). Innovative climate-smart agricultural practices will also be demonstrated on smallholder farmers on traditionally owned lands for sustainable land management and climate change adaptation that contribute to LDN, protect ecosystem services and food security and enhance profitability (reduced use of chemicals and water, better soil conservation, agroforestry and tree nurseries, mixed cropping, marketing of local produce etc.). The project will also bring a new focus on the infrastructure sector as a major source of land degradation, supporting innovative best practices to avoid new and solve existing problems.

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Sustainability: Institutional sustainability will be achieved through building off the arrangements, achievements and lessons of previous GEF investments and supporting existing policies and coordination mechanisms to help eliminate duplication and streamline efforts to achieve LDN. Systematic capacity development of national/state government land management and infrastructure agencies and their extension services, as well as the private sector and communities in the demonstration landscapes will deliver lasting benefits. Leverage gains will be achieved through the sharing of knowledge and data and the alignment of targets and common objectives of national/state strategies and programmes. Financial sustainability will be achieved through: a) alignment of existing government funded programmes with LDN objectives; b) promotion of public-private-community partnerships; c) development and promotion of new business models for agroforestry based on improved profitability and opportunities for added-value products and improved ecosystem services (soil fertility, water quality, climate change adaptation etc.); d) facilitating market linkages (including with the tourism sector), encouraging the private sector to invest in sustainable and profitable SME businesses; e) ensuring sustainable infrastructure development that avoids costs from damage to ecosystem services. Through these measures, the project will demonstrate livelihood benefits for smallholder farmer households in the demonstration landscapes (greater resilience and 10% improvement in profitability) through reduction in input costs, enhanced income from added-value products and improved marketing and diversification, with the potential for wide replication. Social sustainability will be achieved through strengthening stakeholder participation mechanisms between local government, communities and the private sector (including infrastructure) in the demonstration landscapes. Project communications will facilitate awareness and enhance stakeholder participation. PPG consultations will ensure collective decision-making mechanisms are built into project design and a stakeholder engagement plan will ensure that key decisions on landscape management priorities have strong buy-in from all stakeholders.

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Potential for scaling-up: By demonstrating a strategic approach, the project will place the FSM in a much stronger position to access substantial investment programmes for scaling-up LDN, such as traditional multilateral and bilateral funding and new innovative financing options and incentive packages. Upscaling at local level will be achieved through agricultural training and extension programmes and sharing of successful interventions through exchanges and visits between communities, landscapes and states.

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[1] Also known as the Caroline Islands, along with Palau

[2] About 33% of the government expenditure for fiscal year 2016

[3] 2015 UN Demographic Yearbook

[4] approximately 50% live on Chuuk, 33% on Pohnpei, 10% in Yap and 7% in Kosrae, based on census data from 2010

[5] Household Income and Expenditure Survey (HIES), 2013/14

[6] Averaging -0.2% since 2004 - FSM Office of Budget & Economic Management, 2017

[7] namely the Yap Tropical Dry Forest and the Caroline Tropical Moist Forest Ecoregion: Olson, D.M. & Dinerstein, E. 2002. *The Global 200: Priority Ecoregions for Global Conservation*. Ann. Missouri Bot. Gard. 89:199 – 224.

[8] East Caroline Islands EBA and Yap Islands EBA, http://datazone.birdlife.org/eba/factsheet/190

[9] http://www.keybiodiversityareas.org/kba-data accessed December 2020

[10] https://avibase.bsc-eoc.org/checklist.jsp?region=FM

[11] https://www.iucnredlist.org/search?landRegions=FM&searchType=species

[12] FSM Forest Inventory Analysis, 2016. This showed a large reduction since the previous Analysis for 2006 (65,526 ha) but the differences are thought to be largely due to methodology.

[13] https://www.adb.org/sites/default/files/publication/29736/hardship-micronesia.pdf

[14] Agriculture census, 2016

[15] Household census data, 2013/14

[16] Household income and expenditure survey 2013/2014 Factsheet

[17]FSM (2010), Fourth National Report to the CBD

[18] In 2017, 67.2% of households owned livestock, of which 48.7% was for household consumption and the remaining 18.5% for selling. In a 2013/2014 household survey, pigs represented 94% of the total value of livestock production sold, consumed or gifted, the remaining 6% were chickens and other livestock.

[19] FSM Fifth National Report to the Convention on Biological Diversity, 2014

[20] https://www.sciencedirect.com/science/article/pii/S0301479711004294

[21] https://www.researchgate.net/publication/226471547_Ecosystem_Carbon_Stocks_of_Micronesian_Mangrove_Forests

[22] https://www.fs.fed.us/psw/publications/4154/psw_2010_krauss001.pdf

[23] https://scholar.law.colorado.edu/cgi/viewcontent.cgi?article=1166&context=books_reports_studies

[24] https://covid19.who.int/region/wpro/country/fm

[25] https://sustainabledevelopment.un.org/content/documents/26668VNR_2020_Micronesia_Report.pdf

[26] https://www.adb.org/news/adb-provides-14-million-grant-help-fsm-respond-COVID-19

[27] Covid 19 has impacted progress of the GEF-5 project which is currently being implemented.

[28] https://fsm-data.sprep.org/dataset/fsm-state-environment-report-2018

[29] https://www.cbd.int/doc/nr/nr-06/fm-nr-06-en.pdf

[30] Unsustainable fishing is also a major threat to the FSM's marine ecosystems which also impinges on coastal zone management, but was considered to be out of scope for this project

[31] From PIR 2020 for the GEF-5 R2R project

[32] FSM Fifth National Report to the Convention on Biological Diversity, 2014

[33] UNDP/Department of Resources & Development “Safeguarding biodiversity from invasive alien species in the Federated States of Micronesia” project

[34] Federated States of Micronesia Agriculture Policy, 2012-2016

[35] IUCN Invasive Species Specialist Group

[36] http://www.griis.org/about.php (2018)

[37] https://www.cbd.int/doc/world/fm/fm-nr-05-en.pdf

[38] Urbanisation is increasing at 1.05% per year.

[39] (FSM Fifth National Report to the Convention on Biological Diversity 2014).

[40] Cannon P.G., Falanruw M., Ruegorong F., MacKenzie R., Friday K., Ross-Davis A.L., Ashiglar S.M., Klopfenstein, NB, Liu Z., Golabi M., Iyekar C.T. (2014). The causes of mangrove death on Yap, Palau, Pohnpei and Kosrae [Chapter II]. In: Cannon, Phil. 2014. Forest pathology in Yap, Palau, Pohnpei, Kosrae, Guam and Saipan, Sept. 2013. Trip Report. Vallejo, CA: U.S. Department of Agriculture, Forest Service, Region 5, Forest Health Protection. p. 13–37.

[41] https://coral.org/wordpress/wp-content/uploads/2014/02/coralmining.pdf

[42] Robert Richmond, 1994. “Coral Reef Resources: Pollution’s Impacts,” Forum for Applied Research and Public Policy 9, no., 55–56.

[43] Chin, A., Lison De Loma, T., Reytar, K., Planes, S., Gerhardt, K., Clua, E., and Burke, L., Wilkinson, C. (2011). Status of Coral Reefs of the Pacific and Outlook: 2011. Publishers Global Coral Reef Monitoring Network. 260pp.

[44] Houk, P., Camacho, R., Johnson, S., McLean, M., Maxin, S., Anson, J., et al. (2015) The Micronesia Challenge: Assessing the Relative Contribution of Stressors on Coral Reefs to Facilitate Science-to Management Feedback. PLoS ONE 10(6): e0130823. doi:10.1371.

[45] Allen, G. R. (2005). Final Report: Reef Fishes of Pohnpei, Federated States of Micronesia. The Conservation Society of Pohnpei. AND Turak, E., & De Vantier, L. (2005). Reef-building corals and coral communities of Pohnpei, Federated States of Micronesia: Rapid ecological assessment of biodiversity and status. Conservation Society of Pohnpei.

[46] Allen, G. R. (2007). Final Report: Reef Fishes of Yap, Federated States of Micronesia.

[47] Donaldson, T.J., J. M. Maragos, M Luckymis, S. Palik, and O. Nedlic., 2007. Coral and fish surveys at Kosrae Island, July-August 2006, Federated States of Micronesia: a Preliminary Report prepared for the Kosrae Rapid Ecological Assessment. Prepared for Kosrae Conservation and Safety Organization and The Nature Conservancy. Pohnpei, Federated States of Micronesia. 36 pp.

[48] http://pdf.wri.org/reefs.pdf

[49] according to Yap Environmental Protection Agency (YEPA). https://reefresilience.org/wp-content/uploads/State-of-Coral-Reef-Ecosystems-in-the-Federated-States-of-Micronesia-2008.pdf

[50] The Nature Conservancy. 2003. A Blueprint for Conserving the Biodiversity of the Federated States of Micronesia. Micronesia Office, The Nature Conservancy. Arlington, VA. 104 pp.

[51] The Global CRI analyzes quantified impacts of extreme weather events – both in terms of fatalities as well as economic losses that occurred. The countries ranking highest are the ones most impacted and should consider the CRI as a warning sign that they are at risk of either frequent events or rare, but extraordinary catastrophes. https://www.germanwatch.org/en/16046

[52] www.pacificclimatechangescience.org

[53] https://www.cbd.int/doc/world/fm/fm-nr-05-en.pdf

[54] https://pdf.wri.org/reefs_at_risk_revisited.pdf

[55] A state whereby the amount and quality of land resources necessary to support ecosystem functions and services and enhance food security remain stable or increase within specified temporal and spatial scales and ecosystems https://www.unccd.int/sites/default/files/

inline-files/dec3-COP.12eng.pdf

[56] https://fsm-data.sprep.org/dataset/fsm-state-wide-assessment-and-resource-strategy-swars-2010-%E2%80%93-2015

[57] https://fsm-data.sprep.org/dataset/fsm-agriculture-policy-2012-2016

[58] Yap does not specifically state mangrove ecosystems, but it plans an ecosystem management approach for natural resources and the use of Ecosystem-Based Adaptation (EbA) strategies for adapting to climate change.

[59] https://fsm-data.sprep.org/dataset/fsm-state-environment-report-2018#:~:text=The%20FSM%20SoE%20Report%20reveals,environment%2C%20and%20culture%20and%20heritage.

[60] Ontl, Todd & Schulte, L.A.. (2012). Soil carbon storage. Nature Education Knowledge. 3.

[61] https://www.adb.org/sites/default/files/linked-documents/cobp-fsm-2016-2018-ld-02.pdf
http://www.ipcinfo.org/fileadmin/user_upload/sap/docs/Food%20Security%20Policy%20Measures%20in%20the%20Federated%20States%20of%20Micronesia%202014.pdf

[62] 60% of the population are under the age of 25

[63] http://fsmlaw.org/fsm/index.htm

[64] See https://www.sprep.org/attachments/Publications/EMG/sprep-legislative-review-fsm.pdf - to be updated during the PPG

[65] Federated States of Micronesia State of Environment Report. Apia, Samoa: SPREP, 2019. 174 p

[66] Federated States of Micronesia National Environmental Management Strategy 2019–2023. Apia, Samoa: SPREP, 2019.

[67] http://countrysafeguardsystems.net/sites/default/files/Micronesia%20Disaster%20Risk%20ClimateChange%20Policy%202013.pdf

[68] http://extwprlegs1.fao.org/docs/pdf/mic185804.pdf

[69] http://extwprlegs1.fao.org/docs/pdf/mic185801.pdf

[70] http://www.fao.org/faolex/results/details/es/c/LEX-FAOC185803/

[71] https://bsrp.gsd.spc.int/wp-content/uploads/2017/08/JSAP-report_web-1.pdf

[72] https://fsm-data.sprep.org/dataset/fsm-forest-action-plan/resource/36c5a5a4-fd6b-444a-9cc4-38fa285d0c32

[73] https://fsm-data.sprep.org/dataset/fsm-state-wide-assessment-and-resource-strategy-swars-2010-%E2%80%93-2015/resource/de18178a-4a69

[74] http://www.micronesiachallenge.org/

[75] https://fsm-data.sprep.org/dataset/blueprint-conserving-biodiversity-fsm/resource/79d397a2-c50d-4d46-8e38-36862f44cc29

[76] Including the 5,000ha Pohnpei Watershed Forest Reserve, several watersheds in Kosrae and in the Yamil municipality in Yap.

[77] https://fsm-data.sprep.org/dataset/fsm-state-environment-report-2018

[78] https://fsm-data.sprep.org/system/files/FM_National%20Protected%20Areas%20Network%20%20Policy%20Framework%202015.pdf

[79] https://fsmdata.sprep.org/

[80] https://iclim.decem.gov.fm/

[81] http://islandatlas.org/#/

[82] https://mcterrestrialmeasures.org/#/fsm

[83] US Dept. of Agriculture Soil Conservation Service Soil Survey reports for Micronesia, 1980–83.

[84] https://fsm-data.sprep.org/dataset/federated-states-micronesia-integrated-agriculture-census

[85] https://www.spc.int/CoastalFisheries/CFM/Document/ShowDocument/31669444-78dd-482d-8598-692cc3056825?attachment=False

[86] http://www.comfsm.fm/myShark/news/item=2343/mod=10:01:27

[87] A circular mode of farming production in which the pig manure is used to generate biogas through a digester and the liquids are used as fertilizers.

[88] Including construction of 10 greenhouses, multiple separate trainings with communities on Greenbelt species identification, seed collection, alternative natural potting and growing materials, nursery operations and management, and the planting of 30,000 seedlings in Kosrae, and 70,000 in Chuuk.

[89] https://www.stateforesters.org/wp-content/uploads/2018/08/Federated-States-of-Micronesia-2018.pdf

[90] https://www.researchgate.net/publication/321293872_Enhancing_Adaptive_Capacity_and_Climate_Change_Resilience_of_Coastal_Communities_in_Yap

[91] https://www.thegef.org/sites/default/files/project_documents/FINAL_R2R_5517_PRODOC_30Apr2015_PMC__223_325_0.pdf

[92] https://www.thegef.org/project/safeguarding-biodiversity-invasive-alien-species-federated-states-micronesia

[93] https://www.adaptation-fund.org/projects-programmes/

[94] http://piccc.net/project/micronesian-mangrove-adaptation-initiative/

[95] https://stapgef.org/sites/default/files/publications/STAP%20LDN%20Guidelines%2016-pager%20web%20version.pdf

[96] UNCCD and FAO. 2020. Land Degradation Neutrality in Small Island Developing States. Technical report. Bonn, Germany.

[97] https://www.stapgef.org/theory-change-primer

[98] https://www.unccd.int/news-events/guidelines-land-degradation-neutrality-published

[99] http://www.fao.org/3/ca7469en/CA7469EN.pdf

[100] See guidance on opportunities in http://www.fao.org/policy-support/tools-and-publications/resources-details/en/c/1273768/

[101] Approval depends on political will and speed of government processes and cannot be promised during the project period. However, the project can facilitate these processes through advocacy and technical support.

[102] https://www.unccd.int/publications/scientific-conceptual-framework-land-degradation-neutrality-report-science-policy

[103] https://islandatlas.org/

[104] https://earthobservations.org/index.php

[105] Options for collaboration and support will be explored during the PPG, despite the FSM not being a formal partner

[106] https://www.stapgef.org/guidelines-land-degradation-neutrality

[107] https://mangroveactionproject.org/mangrove-restoration/

[108] Options for private sector partner involvement to be assessed/consulted on during the PPG and assessed using the Private Sector Due Diligence Assessment Tool

[109] https://fsm-data.sprep.org/system/files/PGS%20Guide%20FSM%20Version%201.0.pdf

[110] https://knowledge.unccd.int/

[111] https://pislmsids.org/

[112] https://stapgef.org/sites/default/files/publications/STAP%20LDN%20Guidelines%2016-pager%20web%20version.pdf

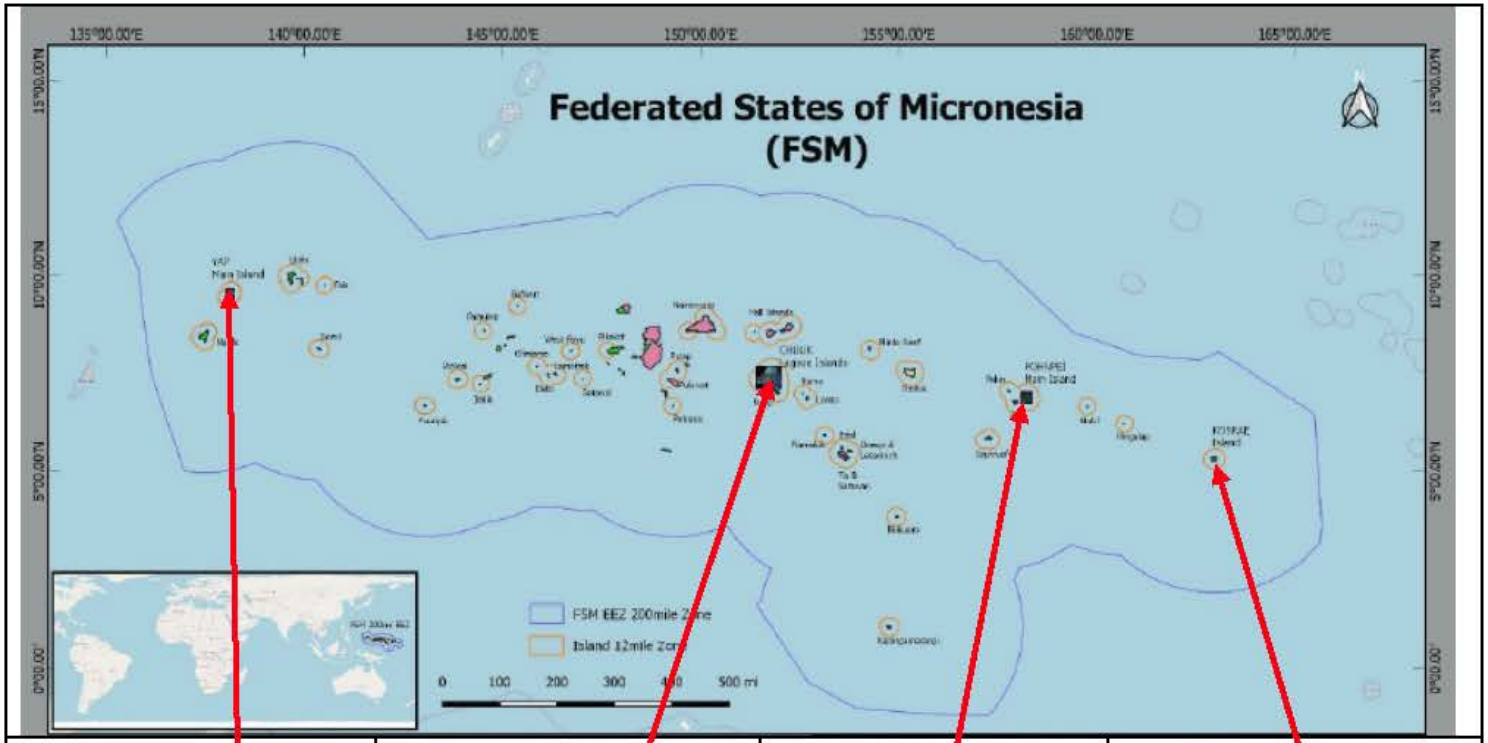
[113] Primarily SDG15 Life on Land and SDG 14 Life below Water; but also SDG 13 Climate Action, SDG 3 Good Health and Wellbeing, and SDG 5 Gender Equality.

1b. Project Map and Coordinates

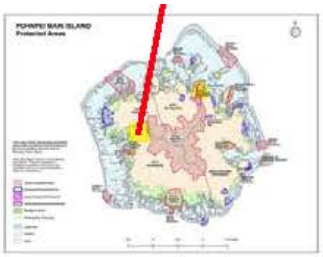
Please provide geo-referenced information and map where the project interventions will take place.

Also s

PROGRAM/PROJECT MAP AND GEOGRAPHIC COORDINATES



Yap: Gagil-Tomil Island Northern Road Improvement Project	Chuuk: Wichen River	Pohnpei -Behleng Demonstration Landscape	Kosrae -Tofol and Innem Watershed

			
9°32'31.99"N 138°10'02.31"E	7°27'14.94"N 151°52'11.82"E	6°52'44.40"N 158°10'08.80"E	5°19'30.45"N 163°00'18.88"E

The designations employed and the presentation of material on this map do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations or UNDP concerning the legal status of any country, territory, city or area or its authorities, or concerning the delimitation of its frontiers or boundaries.

ee Annex A.

2. Stakeholders

Select the stakeholders that have participated in consultations during the project identification phase:

Indigenous Peoples and Local Communities Yes

Civil Society Organizations Yes

Private Sector Entities

If none of the above, please explain why:

In addition, provide indicative information on how stakeholders, including civil society and indigenous peoples, will be engaged in the project preparation, and their respective roles and means of engagement

A wide array of individuals, communities, agencies and organizations are already acting to conserve the irreplaceable natural resources of the FSM. Stakeholder engagement has been at the forefront of the development of this PIF, but because of the dispersed nature of the states and covid-19 travel and social distancing restrictions had to be mainly conducted remotely. Initial rounds of engagement with each state were conducted during preparation of initial concept notes during 2020. Then, from January-May 2021 the PIF team engaged in numerous communications with key national and state level stakeholders; a PIF Working Group met remotely twice (for an inception workshop and a validation workshop), engaging state and national-level stakeholders in collective discussions and validation of the PIF. The lead state agencies had initial communications with the municipalities and NGOs/CSOs that are actively working with local indigenous communities in the proposed landscapes. During the PPG phase more intensive engagement will be required in each state to fully engage with all stakeholders, particularly the communities in each demonstration landscape to ensure that they have been fully consulted on, understand and support the project design and safeguarding measures. Preferences for FPIC will be identified and FPIC will be secured. A PPG local engagement strategy will guide this PPG consultation. The engagement of locally-based experts and organizations located in project states/landscapes will be used preferentially and as needed if travel restrictions are ongoing during PPG. The following table provides an indicative list of the main stakeholders who may have an interest in the project and will be engaged in project preparation and implementation along with their respective roles and means of engagement. A comprehensive stakeholder engagement plan for project implementation will be prepared during the PPG.

Stakeholder	Roles and Responsibilities	Potential involvement in the Project
National Level		
Department of Environment, Climate Change & Emergency Management (DECEM)	Mandate includes environment protection, climate change an d disaster management, waste. Houses the GEF Operational Focal Point and focal point for U NCCD Secretariat of the President's Council on Climate Change and Sustainable Development	Project Executing Agency. Coordination of activitie s with other national partners and though its state focal agencies. Attending/chairing meetings, hosti ng the PIU and providing the secretariat and Chair for the project Board. Arranges meetings for the President's Council on CC&SD that is chaired by the Vice President. All Components and Outputs

		All Components and Outputs.
Department of Resources & Development (FSM R&D)	Mandates include: Forestry Fisheries, Agriculture, Biosecurity services, Coastal fishery, Protected Areas Network and Tourism	Key partner for all aspects of SLM and coordination of activities with its state counterparts, attending / organising meetings. All Components and Outputs.
President's Council on Climate Change and Sustainable Development	Advise the President on climate change and sustainable development issues, with oversight of global environmental responsibilities and obligations including UNCBD, UNCCD and UNFCCC.	Can influence and garner political support for the project. This Council is part of the proposed project management structure. Outputs 1.1, 1.2, 1.3 1.4
Department of Health and Social Affairs	Lead on gender issues, and engages CSO partners focusing on youth, women and environment in each state.	Ensure gender equality is mainstreamed throughout project Outputs: 4.4
Department of Education	Policy and coordination for schools and educational programs. Provision of training on environmental studies.	Support curriculum development on environmental studies and educational awareness activities. Output: 4.1
Department of Transportation, Communications and Infrastructure	Manages all interstate and international sea and air transportation, regulates the radio communication spectrum, and implements, coordinates, and manages all capital projects funded by the FSM Congress	Outputs: 1.1, 2.4, 3.1, 3.2, 4.1, 4.2, 4.3
Office of Overseas Development Assistance and Compact Management	Oversight and States-national coordination functions of overseas development assistance funds.	Coordination between existing and pipeline projects to maximize project potential. All Components and Outputs.
College of Micronesia (COM-FSM)	COM-FSM operates through its Cooperative Research & Extension Services on campuses within each state, with funding from National and State governments, and US Department of Agriculture. Key program areas are aquaculture, small island agricultural systems and food, nutrition and health.	Key partner for capacity development and awareness raising in the farming sector. Outputs: 2.4, 3.2, 3.3, 4.2, 4.3
FSM Telecommunication Corporation and Pohnpei Public Broadcasting Corporation	Government-owned broadcasting on TV, radio and internet.	Implementation support through awareness Outputs: 4.1, 4.2
State Governments	**(analogous offices in each State)**	
States Attorney General's Office	Legal review and enforcement of policies and regulations on	Reviews/enforcement of existing laws. Draft new l

	natural resource management.	egislations Outputs: 1.2
State Governments and Governor's A ssociation	States are responsible for natural resource management with in state boundaries.	Involve the Governor and personnel in multiple asp ects of the project. Outputs: 1.3, 3.1
States Council of Traditional Leaders	Community leadership.	Endorsement of activities (usually at community, i sland wide level). Outputs: 3.1
Local governments/ municipalities	FSM States are subdivided into 76 municipalities, with respon sibilities for environmental management. Municipalities are in creasingly partnering with State, NGO, and community actors to enforce NRM regulations.	Key stakeholder for implementation Outputs: 3.1, 3.2, 3.3
	Chuuk State	
Chuuk State Environment Protection Agency	Responsible for environmental protection, including law enfor cement, awareness, monitoring, solid waste control, control o f water and wastewater. Focal point for environment and clim ate change activities.	Focal point of DECEM for project execution at stat e level. Coordination with other state-level partner s All Components and Outputs
Chuuk State Department of Agricultur e and Forestry	Focal point for SLM activities in Agriculture, livestock and for estry	Key partner for SLM implementation at state level. All Components and Outputs.
Chuuk State Department of Marine R esources	Lagoon and reef protection and monitoring	Outputs 1.1, 1.2, 1.3, 1.4, 3.1, 3.2, 4.2
Chuuk Department of Administrative Services	Administers Chuuk State budget.	Coordination of state agencies to prevent budget duplication and ensure compliance. Output 4.4
Chuuk Department of Transport and Public Works	Responsible for public works, seaports, airports and landfill management	Outputs 1.1, 1.2, 1.4, 2.4, 3.1, 3.2
	Kosrae State	
Kosrae Island Resource Management Authority (KIRMA)	Semi-autonomous agency; focal point for biodiversity and cli mate change. Its scope covers environmental protection, mar ine conservation and surveillance, forestry and GIS-related pr ograms.	Focal point of DECEM for project execution at stat e level. Coordination with other state-level partner s All Components and Outputs

Kosrae Department of Resources and Economic Affairs	Oversees marine and land resource management. Divisions responsible for agriculture and land, (model farming, export promotion programs, sustainable livelihoods) and fisheries development in support of sustainable livelihoods and marine surveillance unit.	Key partner for SLM implementation at state level. All Components and Outputs.
Kosrae Infrastructure Policy Implementation Committee (KIPIC)	Lead the planning and implementation of infrastructure policies in Kosrae	Outputs 1.1, 1.2, 1.4, 2.4, 3.1, 3.2
Kosrae Department of Public Works	Responsible for waste and landfill management	Outputs 1.1, 1.2, 1.3, 1.4, 2.4, 3.1, 3.2, 4.2
Kosrae Department of Fisheries	Lagoon and reef protection and monitoring	Outputs 1.1, 1.2, 1.3, 1.4, 3.1, 3.2, 4.2
Kosrae Conservation and Safety Organisation	Protection of natural resources, comprising representatives of government and non-governmental organizations, police and Municipal conservation officers. Collaboration to enforce existing legislation and regulation for natural resource management in general	1.2, 3.1, 3.2, 4.1, 4.2
	Pohnpei State	
Pohnpei State Environment Protection Agency (EPA)	Semi-autonomous agency and focal point for climate change and environmental protection. Oversees waste recycling and waste management.	Focal point of DECEM for project execution at state level. Coordination with other state-level partners All Components and Outputs
Department of Resources & Development	Responsible for Economic Affairs, Agriculture, Forestry and Marine Conservation	Key partner for SLM implementation at state level. All Components and Outputs.
Department of Land and Natural Resources	Planning, organization, budgeting, staffing, monitoring, and evaluation of statutory and regulatory mandates on State land system	Outputs 1.1, 1.2, 1.3, 3.1
Department of Public Safety	Responsible for safeguarding and protecting the lives and property, keeping the peace, and assuring compliance with all applicable laws	Regulation and enforcement for terrestrial and marine areas Outputs 1.2, 1.4, 3.1, 41., 4.2
Soil and Water Conservation Board	Promotes soil and water conservation by preventing erosion and improving the use	Outputs 3.1, 3.2, 3.3, 4.1, 4.2
Pohnpei Office of Fisheries and Aquaculture	Responsible for health of the inshore marine ecosystem, fisheries management and aquaculture	Outputs 1.1, 1.2, 1.3, 1.4, 3.1, 3.2, 4.2
Pohnpei Utilities Corporation	Engineering and planning, power, water and wastewater	Outputs 1.1, 1.2, 1.4, 2.4, 3.1, 3.2

Department of Transportation and Infrastructure	Responsible for landfill management	Outputs 1.1, 1.2, 1.3, 1.4, 2.4, 3.1, 3.2, 4.2
	Yap State	
Yap State Environment Protection Agency	Semi-autonomous environment protection agency with responsibilities for awareness and law enforcement	Focal point of DECEM for project execution at state level. Coordination with other state-level partners All Components and Outputs
Yap State Department of Resources & Development	Division of Agriculture & Forestry (DAF) covers agriculture, livestock, forests. Also has Division of Land Resources (responsible for land registration and GIS) and Division of Marine Resources Management	Key partner for SLM implementation at state level. All Components and Outputs.
Office of Planning and Budget	Responsible for aligning departmental/divisional activities with State plans and priorities. Coordinates state-wide planning for coastal and terrestrial management.	Key partner for landscape level planning Outputs: 1.1, 1.3, 3.1, 4.4
Yap State government Department of Transport and Public works	Responsible for public works, infrastructure, sea ports and airports, oversees landfill management	Outputs 1.1, 1.2, 1.4, 2.4, 3.1, 3.2, 4.2
NGOs, regional/international organisations, bi-lateral partners and private sector		
Nationwide NGOs	Island Conservation, Micronesia Catholic Relief Services, Micronesia Productions. FSM Women's Council	Key stakeholders for ensuring grassroots involvement in needs assessment, planning implementation All components and Outputs
State-level NGOs	Island Food Community of Pohnpei, Conservation Society of Pohnpei, Chuuk Conservation Society, Chuuk Youth Council, Chuuk Women's Council, Ship-Hoops (Chuuk), Yonkgu Association (Chuuk), Kosrae Women's Association, Kosrae Women in Farming, Kosrae Farmers Association, Kosrae Youth Development Association, Yela Environmental Landowners Authority (Kosrae), Pohnpei Women's Council, Yap Community Action Programme (YAPCAP), Yap Fusion, Yap Locally Managed Area Network, Yap Institute of Natural Science, Yap Women's Association.	Key stakeholders for ensuring grassroots involvement in needs assessment, planning implementation, raising awareness Outputs: 3.1, 3.2, 3.3, 4.1, 4.2
Regional/International	Micronesia Conservation Trust (MCT), Secretariat of the Pacific Regional Environmental Programme (SPREP), The Nature Conservancy – Micronesia, Pacific Resources for Education and Learning (PREL), Local Managed Area Network, Pacific Co	Key partners for technical assistance and knowledge sharing Outputs: 4.2, 4.3

	mmunity (SPC), Pacific Invasives Learning Network (PILN), P acific Regional Invasive Species Management Support Servic e (PRISMSS), Pacific Islands Managed and Protected Area Co mmunity (PIMPAC), Regional Invasive Species Council (RISC), Micronesia Challenge Regional Office.	
UNDP including: Joint Presence Offic e (Pohnpei), Regional Office (Fiji) and UNDP/GEF RTA	Key development partner of government.	GEF Agency All Components and Outputs and project oversight
US Department of Agriculture (Natura l Resources Conservation Service an d Forest Service)	Through USDA Cooperative Agreement, these two US Federal Agencies provide technical assistance through grants, conser vation planning and field support on forestry and soil conserv ation.	Technical support Outputs: 1.1, 3.1, 3.2, 3.3, 4.2, 4.3
Business/Private Sector	Farmers (small and large), traders and local food vendors, pro cessors, exporters/importers. Farmers Associations and coo peratives, State Chambers of Commerce, Small Business Dev elopment Centers (in each State), Media e.g. Kaselehlie Pres s, C4Life Initiative, Vital's Coconut for Life project. National/st ate infrastructure organizations (utilities (e.g., Vital - national energy supplier), FSM Telecom), construction companies.	Improving environmental performance to reduce la nd degradation; enhancing livelihoods; and potenti als to support implementation Outputs: 1.2, 2.3, 2.4, 3.1, 3.2, 3.3

3. Gender Equality and Women's Empowerment

Briefly include below any gender dimensions relevant to the project, and any plans to address gender in project design (e.g. gender analysis).

Land degradation and climate change have been recognized as root causes of poverty and social instability in many SIDS, and these issues can lead to domestic violence, conflict and forced migration as a result of resource scarcity and increased disaster occurrences[1]. Women are the first bearers of food and water in SIDS and are more sensitive to issues of land degradation, as they are at the forefront of facing the climate-induced impacts of sea level rise, coastal erosion, saline water intrusion, and depletion of fresh water and food supply[2]. There are many examples of this in the FSM, for example where the intrusion of the ocean into garden patches has had a profound effect on the women. The adoption of a National Gender Policy in 2018, with National and State Action Plans to support implementation has supported significant progress in government and civil society to address gender issues, and the FSM is also an active partner in the *Pacific Women* programme supported by the Australian Government[3]. Social and gender equity is also one of the principles of the national Agriculture Policy. However, a gender stock take undertaken by SPC[4] in 2019 shows that much more is required - for example, men outnumber women by about two to one in waged employment and women are also under-represented in the subsistence economy; in contrast, in the civil society arena women can play a predominant role and earn substantially more than men. School children and youth are historically vulnerable sectors and absent in decision making processes.

Based on these differences, risks related to unequal participation and benefits of women and youth in the project have been identified in the pre-screening version of the SESP. Due to existing local hierarchies, cultural practices and traditional governance, gender imbalances exist in governance, community, and household positions across the FSM. Women could therefore be marginalized within project stakeholder participation, governance arrangements, capacity building, livelihoods development, and knowledge sharing. For this reason, gender and youth considerations have already been integrated into the project design, particularly by including gender improvements into 7 of the 15 targets in Table A, including for representation, capacity, household income, awareness and learning. Driven by these targets and working closely with the Gender Development Office under the Department of Health and Social Affairs (DHESA) and with the FSM Women's Council and its state level chapters, the project will contribute to their work on women in development and related women's programmes in aspects related to SLM particularly in the agriculture sector. The project will also aim to build-off and learn from existing initiatives to support livelihoods of women and youth. During the PPG, the risks and opportunities and the specific situation in each landscape will be assessed in detail and UNCCD guidance[5] will be applied to further integrate gender issues and promote gender equality into this LDN project.

A Gender Analysis and Action Plan will be prepared by a Gender specialist during the PPG to detail all aspects of gender mainstreaming in the project design as set out in the GEF's *Guidance to Advance Gender Equality in GEF Projects and Programs*[6]. Potential opportunities that will be explored further during the PPG phase include equitable women's involvement in project governance and staffing, intersectoral committees established through the project (e.g. for example in the Project Steering Committee, on the intersectoral SLM committee (Output 1.4) and in state or landscape coordination committees; targeted capacity building and support from extension services (Output 2.4), specific targeted opportunities for women's involvement in SLM and support for marketing of agricultural produce (Output 3.3); and knowledge sharing on gender mainstreaming successes and lessons learned (Output 4.2). Detailed consultations with women at all levels, and particularly in the demonstration landscape communities, will be conducted during the PPG phase. Adequate budget will be included to ensure any necessary gender training of project staff and stakeholders at project start-up. Further specific measures and indicators will be

included in the project design to mainstream women and youth into the project at all levels, building on best practice approaches and lessons learned from baseline interventions. Gender-based indicators and targets will be used to mainstream gender throughout the project, emphasizing empowerment of women and youth.

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[1] http://www.fao.org/policy-support/tools-and-publications/resources-details/en/c/1273768/

[2] file:///C:/Users/Owner/Downloads/Intergratinggender%2520in%2520disaster%2520managment%2520in%2520SID.pdf

[3] https://www.dfat.gov.au/sites/default/files/pwspd-fsm-summary.docx

[4] https://www.spc.int/sites/default/files/wordpresscontent/wp-content/uploads/2017/03/web_2-FSM_gender_stocktake.pdf

[5] https://catalogue.unccd.int/1223_Gender_Manual.pdf

[6] https://www.thegef.org/sites/default/files/council-meeting-documents/EN_GEF.C.54.Inf_.05_Guidance_Gender_0.pdf

Does the project expect to include any gender-responsive measures to address gender gaps or promote gender equality and women empowerment? Yes

closing gender gaps in access to and control over natural resources; Yes

improving women's participation and decision-making; and/or Yes

generating socio-economic benefits or services for women. Yes

Will the project's results framework or logical framework include gender-sensitive indicators?

Yes

4. Private sector engagement

Will there be private sector engagement in the project?

Yes

Please briefly explain the rationale behind your answer.

Because of its focus on the agriculture and infrastructure sectors, this project will require engagement with the private sector. Opportunities to engage the private sector in project activities and partnerships both nationally and in each landscape will be given priority during the PPG and the task of exploring private sector partnerships will be allocated to a PPG consultant with experience in this field. Opportunities include engagement at national and state levels with private sector stakeholders through the FSM Association of Chambers of Commerce, states Chambers of Commerce and also Small Business Development Centers and targeted national utilities – for example for the development of the NAP to combat land degradation (Output 1.1), for strengthened regulations, ordinances and standards (Output 1.2), for guidelines and protocols for SLM (Output 2.3), for training under Output 2.4 and for activities in the demonstration landscapes under Component 3. Entry points for engaging with the private sector will be led by the state EPAs and R&Ds and will be defined during the PPG.

The 2012 Agriculture policy promotes private sector-led agriculture growth and recognizes that the private sector is the major sector output generator. Under Output 3.3, the project will engage with smallholder farm businesses across the demonstration landscapes and may also work with farmer associations, traders, food vendors, processors and even exporters to help build the profitability of farms that engage in SLM practices building on the opportunities arising from recent trends in consumer demand for high quality, healthy and local foods. The project will also explore opportunities to engage with and up-scale the Participant Guarantee Systems farmers groups program (a locally focused quality assurance system) being piloted with the (private sector), Vital funded Coconut for Life project and the FSM GCF Food Security Project. Similarly, post-COVID, opportunities should re-emerge to engage the tourism sector in agri-tourism (e.g., farm visits and sourcing food from local farmers and associations). For the infrastructure sector, the project will support the state EPAs to improve the environmental performance of both public sector institutions and private sector corporations (see stakeholder analysis) through the development of regulations, standards, and guidelines for ecologically-friendly infrastructure development (Outputs 1.2 and 2.3) and will support training in the implementation of these measures (Output 2.4).

All private sector partners and partnership arrangements and possible co-financing commitments will be confirmed during the PPG stage, and UNDP due diligence processes conducted.

5. Risks to Achieving Project Objectives

Indicate risks, including climate change, potential social and environmental risks that might prevent the Project objectives from being achieved, and, if possible, propose measures that address these risks to be further developed during the Project design (table format acceptable)

Six identified risks relate to the feasibility of project implementation. Analysis of these risks has taken full account of the COVID-19 pandemic and the related GEF guidance. They are followed by 11 social and environmental risks identified through a pre-screening assessment using the standard UNDP Social and Environmental Screening Procedure (SESP), plus four risks identified through a climate change pre-screening assessment. All risks have been scored as Moderate, giving the project an overall risk categorization of Moderate. A comprehensive SESP will be undertaken during the PPG phase and the risks will be reviewed in detail and adjusted if necessary, including their risk scores and management measures.

Risk	Rating	Mitigation Strategy
Implementation Risk 1: Competing mandates and poor coordination between national government/state agencies/Departments, exacerbated by the federated arrangements of the FSM may disrupt project activities	Moderate	Proper coordination between national government departments and agencies and with and between the states enhances and sustains project progress that is aligned with agreed priorities. All relevant agencies have been engaged in PIF development and initial discussions on implementation arrangements commenced. DECEM will ensure proper coordination and management of stakeholders.
Implementation Risk 2: Reduced funding for the environment sector, limited human resources in government and competing priorities, including as a result of the COVID-19 pandemic, may impact project activities	Moderate	Human resources will be hired under this project to build government's capacity and the project will have a dedicated PIU housed within the Implementing Partner, DECEM. Staff recruited to build government's capacity may be absorbed by government once project ends. The project strategy will be aligned as far as possible to support the government's longer-term strategy for development, through a focus on SLM. The project includes green recovery elements to address the impacts of COVID-19, under Output 3.3
Implementation Risk 3: Indigenous peoples and local communities do not fully commit to project	Moderate	Local communities and individuals engage when they fully understand their roles and the associated benefits they will get from the initiative or project. PPG consultations and the stakeholder engagement plan developed during the PPG must ensure that local communities, indigenous people and other stakeholders are fully involved in designing, co-creating and promoting the proposed project interventions/solutions, with any outstanding issues resolved during the design, planning and inception phases of the project. A grievance mechanism will be put in place to fully address any complaints.
Implementation Risk 4: COVID-r	Moderat	If current COVID-related travel restrictions continue during the PPG and/or i

elated delays/restrictions and other logistical impacts on PPG and/or implementation, requiring a shift to virtual processes and engagement	e (implementation) -High (PPG)	mplementation phases, it will not be possible for international consultants to participate in these phases, and international NGO partners will also face similar restrictions. Restrictions on the travel of islanders between States/islands and with neighbouring Pacific states may also occur. There may also be increased costs of procurement and travel. These risks will be considered in detail during the PPG and mitigated as necessary through hiring local expertise supported remotely by national and international specialists, and through conservative budgeting and contingency planning. Virtual measures will be used during the PPG as needed. PIF development has been based on strong national/state ownership and substantive support by a national expert, with virtual guidance and coordination by UNDP and an international consultant. This model will be replicated during the PPG as needed.
Implementation Risk 5: COVID-19 has impeded local livelihoods and raised feasibility questions about some project activities such as integrated landscape plans, sustainable agricultural practices and diversification	Moderate	During PPG, livelihood assessments will be conducted taking full account of COVID-19 climate-related impacts and risks, and in full consultation with communities. Project will promote diversification of income streams from sustainable agriculture, particularly agroforestry product development and marketing, aligning with broader government planning and economic recovery processes. The project will facilitate connections to other livelihood development initiatives operating in demonstration landscapes, including agri-tourism options will be considered taking account of UNWTO guidelines and processes for tourism recovery and resilience.
Implementation Risk 6: Due to its complex and technical nature, the project could be difficult to implement and may be unable to lever significant transformational change	Moderate	During the PPG, a strategic assessment should be undertaken with DECEM and the states of the ambition levels of the project and number/size of demonstration landscapes in relation to the funding available as well as external factors (e.g. COVID-19). Should significant concerns emerge, the ambition levels (including GEBs) should be reduced, and/or specific mitigation measures and adaptive management mechanisms should be incorporated into the project design. Project partnerships and coordination with other initiatives and donors will be used to ensure efficient and cost-effective technical project design and implementation, including shared use of technical specialists and tools as far as possible.
Social and environmental risks (from SESP pre-screening)		
Risk 1: The introduction of new measures to address land degradation through SLM and biodiversity mainstreaming in the demonstration landscapes coul	Moderate	Based on the Moderate assessment of this and other risks, and to ensure that the project meets the high standards required by UNDP and Government, preparation of an Environmental and Social Management Framework (ESMF) by relevant specialists has been included in the planning and budget for the PPG, and an ESMP will be prepared at the start of implementation wit

d affect traditional rights or access to some land and resources, potentially increasing conflict between communities and likely affecting more marginalized or vulnerable groups including indigenous peoples, leading to grievances or reprisals against those voicing them.		h targeted ESIA as needed. At PIF stage, due to the nature and objectives of the project and the fact that the many people in the proposed landscapes can be considered as indigenous people, it is recommended that their considerations and needs are fully integrated into the ProDoc and stakeholder engagement plan rather than preparing a separate Indigenous Peoples plan. However, this should be given further detailed consideration at PPG stage. Given that much of land is in customary ownership and the majority of project activities will be undertaken on these lands, the free, prior and informed consent (FPIC) of customary landowners will be required for almost all activities. Obtaining FPIC will be given highest priority during the PPG and implementation stages and should be aligned to raising peoples' understanding of their rights to the project interventions. There is no standard for obtaining FPIC in the FSM nor is there any national association of indigenous people, therefore, the PPG team will implement global best practices to meet the three principles of FPIC: the right to be consulted; the right to participate; and the right to their lands, territories and resources. It will work with community leaders and with existing community groups formed for natural resource management to design and agree the process in each landscape for obtaining FPIC. This process will be integrated into project design such that written FPIC is obtained during the PPG phase. The Stakeholder Engagement Plan prepared during the PPG will further define measures to ensure that the project is well informed by nominated community representatives throughout all planning and implementation phases. A comprehensive grievance redress mechanism will be co-designed with the communities during the PPG and incorporated into the ESMF together with a monitoring and evaluation process. Capacity building, raising environmental awareness and empowering community voice will also be built into the project design. Community knowledge and attitudes will be monitored and measured by a KAP survey. Measures to address land degradation through SLM will aim to incorporate and respect local and traditional knowledge, whilst at the same time offering best practice advice. Incentives for communities to transition to more sustainable land management and livelihoods will be designed during the PPG. Top-down changes will be avoided, and any adjustments to natural resource use will be designed through informed stakeholder consultations as part of the social and environmental assessment process taking into account potential cumulative impacts with other known existing or planned activities in the area. This will result in the development of a Livelihoods Action Plan in Year 1 of project implementation.

Risk 2: Women and other marginalized groups could face discrimination, violence or lack voice within decisions, benefits and resources surrounding project design and implementation, leading to grievances or reprisals against those voicing them	Moderate	The key recommendations from the gender analysis will be captured in a Gender Action Plan and mainstreamed within the project framework, including the incorporation of age and sex-disaggregated data and gender statistics and specific measurable indicators related to gender equality and women's empowerment. Already at PIF stage, gender and youth considerations have been integrated into eight of the thirteen project outcome targets. Implementation should aim to reduce gender inequalities and support rights for women in the demonstration landscapes through capacity development and female participation, with the support of community leaders and local governments. Both women and men will be provided with equal access to advice and opportunities, including in project governance mechanisms. Mechanisms will be established to encourage and enable people from all marginalized groups to take part in project design and implementation. Knowledge sharing platforms will be developed in order to ensure environmental advice and project planning is distributed to all members of the community. The goal for gender-rights development within the project will be Gen 2, following the UN Markers meaning that the project will promote gender equality significantly.
Risk 3: The introduction of incentives, project related employment and support for sustainable land management or improved livelihoods could cause conflict if not implemented carefully and managed equitably or may support employment that fails to comply with national and international labour standards, leading to grievances or reprisals against those voicing them	Moderate	Financial incentive mechanisms and support for enhanced / more diverse livelihoods will be planned so as not to negatively affect existing economic systems, but as additional benefits to the community as a whole, with emphasis on empowering and including marginalized groups. Mechanisms will be developed to be transparent and community owned. They will address both the negative impacts of the Covid-19 pandemic on the viability of livelihood options, and also any opportunities that may arise from the pandemic to support more sustainable and resilient livelihoods. All measures will be incorporated into a Livelihoods Plan to be prepared in Year 1. Project management measures will be designed to ensure that any employment developed through the project will follow national and international equal opportunity employment laws and international labour standards.
Risk 4: The project may not effectively engage and ensure participation of all stakeholders, including women, indigenous peoples and ethnic minorities, during the project design and the implementation phases. Due to	Moderate	As a result of the detailed consultations to be conducted during the PPG, a comprehensive stakeholder engagement plan will be prepared as an annex to the project document. The project will be designed to raise community awareness over FPIC and rights as well as international human rights principles of inclusion and equality, such that written FPIC is obtained where required before the commencement of project implementation. A grievance redress mechanism will be designed, and the monitoring and evaluation proces

implementation phases. Due to existing inequalities, rights holders may not have the capacity to claim their rights. Some activities will require FPIC and this has not yet been secured and consultations with local communities not commenced due to COVID-19 restrictions.		see mechanism will be designed, and the monitoring and evaluation process will be designed to record any inequalities or grievances that arise within the project and wider community, with attention being brought to the Project Board. Depending on existing capacities and the COVID-19 context and to avoid the risk of transmissions, consultations may be done by local (state-level) specialists, remotely trained and supported by national or international specialists.
Risk 5: Duty bearers may not have the capacity to uphold their duties within the project.	Moderate	Based on the findings of the capacity assessment, training and capacity building will be integrated into project design in order to support duty bearers (particularly members of the Project Board, project staff and consultants and government officials) so they understand their responsibilities for human rights. Budget to address gender/ safeguards issues will be allocated as necessary such that technical support and training on gender and safeguards is provided to the PMU/Board at start of project. A monitoring and evaluation process will monitor the development of capacity within the project team and stakeholder groups.
Risk 6: The effects of climate change such as flooding, droughts and storms could impact project areas and activities and vulnerable communities. (see Climate risk screening, below)	Moderate	Project design will take into account the results of the assessment and fully integrate climate change mitigation and adaptation measures through sustainable land management, livelihoods, capacity building and awareness. Demonstrations on the ground will show how avoiding, reducing and reversing land degradation can be a key tool in addressing climate change impacts.
Risk 7: The project could have unintended impacts on valuable natural habitats, globally threatened or endemic species, or production systems if activities are improperly executed, e.g., measures to rehabilitate degraded land or introduce sustainable agriculture or infrastructure could lead to increased erosion risk, poor habitat management could lead to risks to threatened species if habitat needs/requirements not met. I could also contribute to cumulative envira	Moderate	The project design will ensure that new and existing threats to biodiversity from land degradation are avoided, reduced and reversed. Mainstreaming of SLM into particularly the agriculture and infrastructure sectors under Component 1 will follow the Strategic Environmental and Social Assessment (SESA) approach. The project document will specifically state that SESA will be applied to all new policies and legislation/regulations prior to approval by Government and this will be built into detailed project design and budgeting as needed. Under demonstration activities in Component 3, the project document will specifically state that no non-native species will be used for SLM, re-forestation or for livelihoods development. Control methods for IAS (if proposed) will require prior approval by Government and will take place under clear SOPs and management plans, with consideration of potential environmental and social impacts. Measures such as management or rehabilitation plans will ensure compliance with regulations and follow international best practices to avoid negative impacts on natural habitats, globally threat

contribute to cumulative enviro nmental or social impacts in th e area through unintended neg ative consequences from polic y or legislative changes.		best practices to avoid negative impacts on natural habitats, globally threat ened or endemic species, or production systems.
Risk 8: Measures to reduce or r everse land degradation may b e hazardous for the project tea m, officials and pose potential r isks to community health, coul d exacerbate risks of erosion a nd landslides (posing safety ris ks to communities), and may n ot comply with best practice he alth and safety standards.	Modera te	If found to be necessary, the PPG assessment will result in the developmen t of a targeted Health and Safety Plan including standard operating proced ures for safe working. Guidelines will be developed at the start of the projec t as needed, safety equipment will be provided (e.g., PPE) and staff and loc al communities will be trained around identified risks and how to manage t hem. Regular safety checks will be built into the project design, with a proje ct staff member responsible and trained for overseeing H&S.
Risk 9: The proposed project m ay result in interventions in the demonstration landscapes that would potentially adversely im pact sites, structures, or object s with historical, cultural, artisti c, traditional or religious values or intangible forms of culture (e.g., knowledge, innovations, p ractices).	Modera te	If found to be necessary, guidelines for safeguarding cultural heritage will b e developed at the start of the project and staff, consultants and governme nt officers will be trained around risks to cultural heritage.
Risk 10: Measures to address u nsustainable infrastructure ma y create hazardous waste or ca use environmental pollution. D ue diligence also needs to be c ompleted to ensure there are n o enhanced safeguards risks fr om working with any private se ctor organisations with whom t he project may cooperate to su pport LDN/SLM activities.	Modera te	If found to be necessary, the PPG assessment will recommend the develop ment of a targeted plan for reducing the impacts of measures to address u nsustainable agriculture and infrastructure, including standard operating pr ocedures to reduce environmental and social risks (to be prepared in Year 1 of the project). Partnership agreements will be detailed and established with each private sector partner during the PPG phase, or prior to the start of any partnership working. Such agreements will be fully compliant with UNDPs private secto r partnerships policy including any conditions according to the findings of UNDP Private Sector Risk Assessment Tool.
Risk 11: PPG team/project or U	Modera	Assuming the pandemic continues at least through the PPG stage, it is likel

NDP staff/consultants travelling to the FSM and demonstration land/seascapes could increase risk of COVID-19 spread if pandemic is prolonged or if a different pandemic emerges during the project's lifetime.	te	y that PPG activities will have to be undertaken by national consultants, supported remotely by international specialists and external UNDP staff. The potential for inter-island transmission will be reduced by the project including a high degree of devolution of implementation responsibility to state level (i.e., working through state coordinators) Should there be a relaxation on travel restrictions in the future that might allow international specialists to participate in full implementation of the project or indeed movements of locals between states; internationally recognized biosecurity standards will need to be followed.

Climate risk screening

The following climate risk screening has been undertaken at PIF stage to ensure that the fully designed project will be resilient to shocks, and to ensure transformation and durability of GEBs in the face of ongoing climate change.

Key aspects of the climate change projections/scenarios in the FSM

In the absence of comprehensive information and scenarios at national level, a regional summary of climate changes, projections/scenarios and likely impacts has informed this risk assessment[1]. Region-wide, climate trends to date include:

· Average annual temperatures have increased at an average rate of 0.18°C per decade since 1961, with the number of hot days and hot nights increasing

· Sea level rise is around 2-4 times the global average, likely due primarily to natural cyclic phenomena, such as ENSO. Average sea levels have risen 10-15 cm regionwide

· Sea-surface temperatures have increased at a rate of between 0.07 and 0.23°C per decade since the 1970s, with variability across the region

· While the overall frequency of tropical storms has remained level, occurrence of major tropical storms (Category 4 and 5) has generally increased.

Projections are that:

· Broadly across the region, an increase in average annual temperature of around 0.6°C-1.4°C by the 2050s is likely with increase in the number of hot days and hot nights.

· Average annual rainfall is expected to increase slightly across most of the region, likely with more extreme wet seasons, extreme rainfall events, and floods. Rainfall patterns are expected to become less predictable, and with more frequent and intense extreme events, including storms and droughts.

· Sea levels are likely to rise between 17 and 38 cm by 2050, though not uniformly across the region. They are expected to rise by at least the global average projection of over 1 meter by 2100

- Sea surface temperatures are expected to increase by 0.9°C-1.4°C by the 2050s. Tropical cyclones are expected to decrease in frequency, but increase in intensity

Key impacts are predicted as follows:

- Coastal Zones: Saltwater intrusion into habitats, loss of ocean biodiversity, damage to coastal infrastructure
- Agriculture: Decreased crop yield and food security, increased drought frequency/duration, groundwater salinization
- Health: Decreased water quality and availability, decreased nutrition and food security, shifts in infectious disease patterns
- Livelihoods and Tourism: Decreased economic output, reduced interest in ecotourism, damage to coastal ecosystems
- Water resources: Salinization of drinking water sources, decreased water availability for crops, reduced hygiene and sanitation
- Energy and infrastructure: Increased energy costs, damage to key infrastructure, decreased economic output

How the climate scenarios are likely to affect the project, during 2021-2050

Climate change is therefore a significant threat to ecosystems and to the livelihoods, wellbeing, culture and survival of islanders throughout the FSM, compounding the effects of land degradation. As climate changes and sea levels rise and severe weather events become more frequent, the country will become more vulnerable to risks and disasters unless effective adaptation and mitigation measures are taken. The national and state governments have recognized these and other challenges and initiated a series of policy reforms to ensure that development is more inclusive, resilient and sustainable, leading to some recent, progressive environment-related policies and strategies. The over-arching FSM Strategic Development Plan, 2004-23 and the related FSM 2023 Action Plan outline the challenges and ambitions for achieving sustainable development, mainstreaming environmental considerations including climate change into national policy and planning. The nation-wide Integrated Disaster Risk Management and Climate Change Policy (2013) and Joint State Action Plans (JSAPs) demonstrate the great importance attached to increasing FSM's adaptive capacity to adjust to climate change. The Agriculture Policy 2012-2016, the Infrastructure Development Plan (IDP) 2016-25, and the National Biodiversity Strategy and Action Plan (2018-23) all recognize the need to increase resilience to climate change through adaptation and mitigation measures and this project will work in support of this overall national climate agenda as described in the PIF.

Climate Risk Assessment and mitigation measures during PPG to protect GEBs

Risk	Rating	Mitigation Strategy
1. Project outcomes are at risk because of climate change	Moderate (to high)	The project will support the FSM to ensure long-term climate resilience of landscapes through reduction of threats from land degradation, thereby mitigating climate change impacts and benefiting ecosystem services and livelihoods.
2. Climate sensitivity has not been adequately addressed	Moderate	The project recognizes that changes have occurred and are occurring and will plan to assist communities in the demonstration landscapes to protect ecosystem services through preparation and implementation of integrated management plans, nature-based solutions and SLM to address land degradation under Component 3. In addition, government staff will be trained in climate adaptive planning and processes linked to SLM.
3. Resilience practices and measures do not address projected climate risks and impacts adequately	Moderate	Landscapes that are threatened by unsustainable practices are far more likely to be vulnerable to the impacts of climate change. The key objective of this project is to reduce these threats so as to increase resilience and it is therefore important that the interventions deliver outcomes that are commensurate with predicted climate change impacts so that the GEBs can be sustained. A key objective is to reduce agricultural encroachment into forests and to ensure sustainable agriculture and infrastructure which will deliver multiple benefits for ecosystem services, biodiversity and communities including the co-benefit of carbon sequestration as the forests recover. The PPG should assess in detail the project interventions against projected climate change impacts to ensure sustainable outcomes for GEBs
4. There is inadequate technical and institutional capacity and information to address climate change	Moderate	The main technical capacity to be developed will be on climate change impacts, adaptation and mitigation actions for land use and infrastructure planners and agricultural extension officers and communities. These include nature-based solutions to secure ecosystem services and protect communities e.g., from flooding (surface water and seas), deliver carbon sequestration, and support food security through climate-smart agriculture. These aspects will be designed into government and community training programmes during the PPG.

[1] USAID. Climate risk profile of the Pacific Islands. 2018.

6. Coordination

Outline the institutional structure of the project including monitoring and evaluation coordination at the project level. Describe possible coordination with other relevant GEF-financed projects and other initiatives.

e proposed project will take place under the National Implementation Modality with execution supports (NIM)[1], with the Department of Environment, Climate ıange & Emergency Management (DECEM) as Implementing Partner, working through the following focal agencies at State level (to be confirmed at PPG stage with tions for flexibility as determined by each state): Chuuk EPA, Kosrae Island Resource Management Authority, Pohnpei EPA, Yap EPA (as per the current GEF-5 oject). The Implementing Partner will be responsible for project execution working in close coordination with the national Department of Resources & Development SM R&D) and its state agencies. During PPG, options for execution supports will be carefully considered, including i) NIM with 3rd party support services using GEF sources (e.g., Micronesia Conservation Trust (MCT), other UN agencies, etc.); and ii) NIM with UNDP providing support services. Should no suitable options be found provide 3rd party support, UNDP will apply for exceptional approval to provide execution support from the GEF Secretariat. Building on lessons from earlier GEF ojects, the responsible party for each technical output at national and state level will be defined at PPG stage, and an MOU will be signed between DECEM, FSM R&D d the relevant state agencies to ensure that there is clear and formal agreement over responsibilities and clear mechanisms for communication.

Project Implementation Unit (PIU) will be embedded within DECEM working closely with the responsible parties. Key positions will be finalised during the PPG suring that sufficient capacity is embedded in the PIU for effective project execution under Full NIM. The PIU will include at least a full-time project manager, national chnical coordinator, project assistant, finance officer, communications officer, part-time CTA and designated staff to support implementation in each state. This PIU ll be responsible for overseeing project monitoring and evaluation and ensuring a coordinated approach is taken with the delivery of project activities, including egration between activities at national, state and landscape level, and broader collaboration with associated projects and initiatives, including relevant GEF-financed ojects and Pacific regional initiatives. In order to maximise implementation efficiency, options to build off existing mechanisms, networks and experiences with tional (e.g., ongoing GEF) and regional projects will be explored at PPG stage, including sharing/using the same technical specialists and mechanisms as other ojects/initiatives (e.g., international and national consultants from the GEF-5 and GEF-6 FSM projects). Furthermore, the PPG will further explore and incorporate ssons learned from previous GEF projects in FSM, notably under GEF-3 and GEF-5.

A Project Steering Committee (PSC) will be established, building off experience of earlier projects, to provide overall guidance and decision-making for the project. The PSC is proposed to be chaired by DECEM, with indicative membership including representatives of national and state responsible parties and key partner organizations including a representative from the GEF-6 IAS project. Membership will be finalized during the PPG phase. A coordination committee will be established for each State preferably utilising an existing coordination mechanism (e.g., those developed for the GEF-5 and GEF-6 projects) for this purpose.

Project results will be monitored annually and evaluated periodically during project implementation to ensure achievement of desired outcomes. A monitoring and evaluation plan will facilitate learning and ensure knowledge is shared widely to support the scaling up and replication of project results. Project level monitoring and evaluation will be undertaken in compliance with UNDP requirements and UNDP Evaluation Policy. UNDP will work with the relevant

stakeholders to ensure that M&E requirements are met in a timely manner. Additional mandatory GEF-specific M&E requirements will be undertaken in accordance with the GEF M&E policy and other relevant GEF policies. M&E costs (to be included under Component 4) will be calculated in detail during the PPG phase based on the identified results framework indicators and will fall within the allowable 3% of grant size.

GEF-financed and other donor-funded projects in related areas will offer lessons learned, best practices for replication, and opportunities for synergistic impact and knowledge transfer during implementation. The land degradation focus of this project will strongly complement the GEF-3, GEF-5 and GEF-6 projects respectively, plugging an important gap in government capacity and need. Opportunities for building-off the achievements of these projects will be further defined during the PPG phase. Key related ongoing/pipeline projects are indicated below (for regional projects, only the estimated national contribution in FSM is shown as project grant size):

Project	Donor / executing partner / $	Relevant areas of coordination	Indicative coordination mechanism
GEF-5 FSM Implementing an integrated "Ridge to Reef" approach to enhance ecosystem services, to conserve globally important biodiversity and to sustain local livelihoods in the FSM (R2R Project)	GEF/DECEM/UNDP US$ 22.6M	Current GEF project focusing on R2R ecosystem approach and the reduction of conflicting land-uses, land-use practices and strengthening the PA network mainly on the High islands. Relevant to all Outputs.	The project ends in May 2022 but will still be highly relevant and the proposed project will build off many elements. Coordination via DECEM and FSM R&D, but also with former consultants and team members.
GEF-6 Safeguarding biodiversity from invasive alien species in the Federated States of Micronesia	GEF/FSM R&D/UNDP 2020-25 US$ 13M	The project will safeguard biodiversity in terrestrial and marine ecosystems, including agricultural and fisheries production systems, from the impacts of IAS by strengthening the institutionalization and enforcement of biosecurity measures across all sectors of government (federal and state), the private sector and civil society. Relevant to Outputs 1.1, 3.1, 3.2, 3.3, 4.2	Coordination between project steering committees and PIUs, with potential for sharing of human resources etc.

Climate resilient food security for farming households across the Federated States of Micronesia	Green Climate Fund MCT US$ 8.58 M 2022-26	To better target adaptation investments utilizing climate risk data, improve technical capacity for climate smart planning and policy, increase availability, stability, and accessibility of locally grown food for food security, improve nutritional outcomes for vulnerable households, develop new opportunities for income and household productivity, and strengthen climate resilient value chains across the agriculture sector. Relevant to Outputs 1.1, 2.2, 3.1, 3.3, 4.2	Coordination by PIU with the project office At the time of writing, this project had just been approved. Coordination (and co-financing) mechanisms should be detailed during the PPG.
Enhancing the Climate Resilience of vulnerable island communities in Federated States of Micronesia	Adaptation fund, SPREP US$ 9 million 2018-22	To build social, ecological and economic resilience of the target island communities of the Federated States of Micronesia and reduce their vulnerabilities to extreme drought, sea level rise and other climate risks through water resource management, coastal resource and development planning, and by promoting gender perspectives and ecologically sound climate resilient livelihoods. Relevant to Components 3 and 4	Coordination by PIU to follow-up on project achievements. The project focuses on outer islands but may have important lessons.
Practical Solutions for Reducing Community Vulnerability to Climate Change in the Federated States of Micronesia	Adaptation fund, MCT US$ 0.97 million 2018-21	To build the resilience of communities through practical solutions for reducing community vulnerability to climate change. The project aims to ensure that mechanisms are in place to develop and implement a robust nearshore fisheries management and nationwide protected areas network inclusive of proper enforcement and sustainable finance mechanisms. The project also seeks to provide communities with the resources and support needed to implement successful eco-based adaptation actions to protect their marine ecosystems and increase resilience to climate change impacts. Relevant to Components 3 and 4	Coordination by PIU with the project office to follow-up on project achievements.
GCCA+ scalin	European Union	Regional project aiming to improve climate and disaster ri	Coordination by PIU t

g up Pacific Adaptation (GCCA+ SUPA)	2018-23 Euro 15M for region	sk planning, with a focus on the water security in FSM.	o follow-up on project achievements
Strengthening local food systems (impacted by COVID-19)	FAO 2020-2022 US$ 0.499M	Promoting climate-resilient and sustainable urban and peri-urban agriculture value chains. Important to achieving SLM and addressing LDN Relevant to Output 3.3	Coordination by PIU with the project office to follow-up on project achievements
Regional response to effects of COVID-19 crisis in Pacific Island Countries	FAO 2020-2022 US$ 0.50M	Response measures for food security and nutrition and the adoption of fisheries and agriculture practices that address COVID-19 related needs in food production. Relevant to Output 3.3	Coordination by PIU with the project office, particularly with regard to SLM aspects and follow-up on project achievement
Enhancing Disaster and Climate Resilience in the Federated States of Micronesia Through Improved Disaster Preparedness and Infrastructure	UNDP/Govt. of Japan/DECEM US$ 2,251,107 2021-25	The EDCR project will provide weather data for use especially by line ministries responsible for the agricultural component of this project, as well as for climate risk communication with communities in the landscapes Relevant to Outputs 2.2, 2.3, 3.3	Coordination by PIU with the project office / DECEM
GEF Small Grants Programme (SGP)	UNDP/GEF US$ small grants Ongoing	Supporting biodiversity and land degradation outcomes Relevant to Outputs 3.2, 3.3, 4.2	Coordination by PIU with the SGP project office, particularly regarding Component 3.
Proposed GEF-7 Pacific i2i program	GEF, supported by UNEP/UNDP/ADB, Country Participation TBC, $ TBC	Potential opportunities to coordinate and exchange knowledge with the proposed i2i program on matters related to development of a sustainable blue economy (if the program goes ahead).	Coordination via PIU with support of UNDP. Potential to participate (via project budget) in program regio

			nal coordination/KM events.
Chuuk Water Supply and Sanitation Project	ADB US$12.8M 2021-27	To improve utility operation and raise community awareness on good sanitation and hygiene practices and foster water conservation. Relevant to Outputs 3.1, 3.2, 3.3, 4.1, 4.2	Coordination by PIU with the project office
FSM prioritised road investment management and enhancement project	World Bank US$ 40M (loan) 2021-28	To improve the resilience of the country's primary road network to natural disasters and climate change. Relevant to Outputs 1.1, 1.3, 2.2, 2.3, 2.4, 3.2, 4.1, 4.2	Coordination by PIU with the project office

[1] Based on a Significant risk rating in the 2019 HACT Micro-assessment of the Implementing Partner: DECEM.

7. Consistency with National Priorities

Is the Project consistent with the National Strategies and plans or reports and assesments under relevant conventions?

Yes

If yes, which ones and how: NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, INDCs, etc

The formulation of this proposed project follows an extensive consultative process lead by DECEM with the four States to determine their priorities for GEF-7, which concluded in a commitment to focus FSM's GEF-7 resources on the critical issue of land degradation and progress towards LDN. Land degradation from unsustainable agriculture and urban (infrastructure) development is recognised as a key threat/pressure in both the National Biodiversity Strategy and Action Plan 2018-23, the 2018 State of Environment report and reports to UNCCD, also affecting freshwater and marine systems (see earlier section on Threats). By supporting progress towards the five objectives of Land Degradation Neutrality[1], this project requested by the Government of the FSM will contribute to key national priorities outlined in the following plans. The project aligns with four of the strategic agriculture sector goals of FSM's Strategic Development Plan (2004-2023): Goal 1: A well-resourced and properly focused agriculture sector operating within a stable and consistent policy framework; Goal 2: Increase production of traditional farming systems for home nutritional and traditional needs and cash incomes; Goal 3: Increased volumes of saleable surpluses to be marketed by the private sector into local and regional markets; Goal 4: Promote environmentally sound and sustainable production which includes discouraging slash and burn farming/deforestation. In addition, it supports four of the strategic environment sector goals of the SDP: Goal 1: Mainstream environmental considerations, including climate change, in national policy and planning as well as in all economic development activities; Goal 4: Enhance the benefits of sustainable use of the FSM's genetic resources and ensure benefits derived are fairly shared amongst stakeholders; Goal 6: Improve environmental awareness and education and increase involvement of citizenry of the FSM in conserving their country's natural resources; Goal 9: Enhance and employ in-country technical capacity to support environmental programs.

The FSM ratified the UNCCD in 1996 with the focal point as DECEM. The proposed project will support the FSM in its work to achieve the objectives of the UNCCD through supporting preparation of its National Action Program to combat land degradation (NAP), engagement in the LDN target-setting processes, building capacity for achieving land degradation neutrality and demonstrating SLM approaches as well as aligning with work on the SDGs[2] and other relevant commitments for SIDS, including the Paris Agreement, the Sendai Framework for Disaster Risk Reduction, the UN Habitat Principles for Urbanization, and the SAMOA Pathway.

The Government of FSM ratified the Convention on Biological Diversity (CBD) in 1994 with the focal point as FSM R&D. The principal instrument for implementing the CBD at the national level is the National Biodiversity Strategy and Action Plan, 2018–2023 (NBSAP), which is implemented alongside BSAP's for each state. The project is fully aligned with the NBSAP Vision: 'FSM will have more extensive, diverse, and higher quality of marine, freshwater, and terrestrial ecosystems, which meet human needs and aspirations fairly, preserve and utilize traditional knowledge and practices, and fulfil the ecosystem functions necessary for all life on Earth'. In particular it will contribute to the following NBSAP strategic goals: Theme 1 Ecosystem management: A full representation of the FSM's marine, freshwater and terrestrial ecosystems are protected, conserved and sustainably managed, including selected areas designated for total protection; Theme 4 Agrobiodiversity: The conservation and sustainable use of agrobiodiversity contributes to the nation's development and the future food security of the FSM; Theme 5 Ecological Sustainable Industry Development: Economic development activities in the FSM meet the needs

of the population while sustaining resources for the benefit of future generations; Theme 9 Resource owners: Traditional resource owners and communities are fully involved in the protection, conservation, preservation and sustainable use of the nation's biodiversity; Theme 10 Mainstreaming biodiversity: All economic and social activities of the FSM take full account of impacts on and fully consider sustainability of biodiversity.

The Government of FSM is party to the UN Framework Convention on Climate Change (UNFCCC), ratifying the Kyoto Protocol in 1999 and the Paris Agreement in 2016 and with the focal point in DECEM. The government submitted its first Intended Nationally Determined Contribution (INDC) in 2015, committing unconditionally to a 28% reduction by 2025 of its GHG emissions below emissions in year 2000 (35% with additional international support), and also highlighting that adaptation constitutes a priority. The project will support both mitigation and adaptation measures.

Finally, the project will contribute to the FSM's commitment to the UN Sustainable Development Goals, primarily to Goal 15: *Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss,* but also to Goal 5 Gender Equality, Goal 12 Responsible production and consumption, Goal 14 Climate action and Goal 14 Life below water.

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[1] The five objectives of LDN are to: maintain or improve the sustainable delivery of ecosystem services; maintain or improve productivity in order to enhance food security; increase resilience of the land and populations dependent on the land; seek synergies with other social, economic and environmental objectives; and reinforce responsible and inclusive governance of land.

[2] Particularly SDG 15 Life on Land (Target 15.3 Combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world)

8. Knowledge Management

Outline the knowledge management approach for the Project, including, if any, plans for the Project to learn from other relevant Projects and initiatives, to assess and document in a user-friendly form, and share these experiences and expertise with relevant stakeholders.

The project gives high priority to knowledge management through Output 4.2. There are already many good examples of best practices and lessons learned from projects across the FSM and throughout the Pacific. These will be reviewed during the PPG phase and mechanisms for incorporating key learning will be inserted into the project design. During Year 1 of project implementation, these findings will be refined and made available through the project website and other platforms as a baseline to be built upon throughout project implementation. The project will support knowledge management and learning at a range of levels, including: a) within project landscapes (e.g. through community meetings, farmer associations and model farms); b) within States (e.g. through natural resource management committees, demonstration visits and using media and workshops etc); c) between project landscapes (e.g. exchange visits and virtual knowledge exchange sessions); d) across the FSM (e.g. using TV, videos, social media and other technology to document activities and best practices, as well as supporting national level workshops and visits to project landscapes); e) with other countries facing similar challenges in the Pacific and other SIDS (e.g. physical and remote participation in key platforms including those of SPREP and SPC, the Partnership Initiative on Sustainable Land Management (Caribbean) [1], SPC's Atoll Centre of Excellence for Sustainable Agriculture, the UNCCD Capacity Building Marketplace[2] and through virtual exchanges with relevant (including GEF) projects in other SIDS (e.g. in the Seychelles[3]). These opportunities will be further elaborated during the PPG.

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[1] https://pislmsids.org/

[2] https://knowledge.unccd.int/cbm/capacity-building-marketplace

[3] https://prais.unccd.int/sites/default/files/2018-08/Land%20Degradation%20Neutrality%20%20Target%20%20Report%20Seychelles%20Final%20July%202018.pdf

9. Environmental and Social Safeguard (ESS) Risks

Provide information on the identified environmental and social risks and potential impacts associated with the project/program based on your organization's ESS systems and procedures

Overall Project/Program Risk Classification*

PIF	CEO Endorsement/Approval	MTR	TE
High or Substantial			

Measures to address identified risks and impacts

Provide preliminary information on the types and levels of risk classifications/ratings of any identified environmental and social risks and potential impacts associated with the project (considering the GEF ESS Minimum Standards) and describe measures to address these risks during the project design.

Project Information

Project Information	
1. Project Title	Securing climate-resilient sustainable land management and progress towards land degradation neutrality in the Federated States of Micronesia
2. Project Number (i.e. Atlas project ID, PIMS+)	PIMS 6567
3. Location (Global/Region/Country)	Federated States of Micronesia (FSM)
4. Project stage (Design or Implementation)	PIF Design
5. Date	September 2021

Part A. Integrating Programming Principles to Strengthen Social and Environmental Sustainability

QUESTION 1: How Does the Project Integrate the Programming Principles in Order to Strengthen Social and Environmental Sustainability?
Briefly describe in the space below how the project mainstreams the human rights-based approach
Human rights depend on a healthy environment as degraded natural resources often mean the more marginalized and vulnerable communities are mos

t affected. Resource and land-related degradation arising from unsustainable agricultural and infrastructure development policies, plans and practices already exist in all four states of the FSM, and through its implementation activities the project aims to reduce these vulnerabilities and improve rather than impinge on local rights. The project objective is to secure c*ritical ecosystem services through climate-resilient sustainable land and coastal management contributing to land degradation neutrality in the Federated States of Micronesia.*

Following further environmental and social assessments and analysis of local demographics during the PPG, the detailed design of this project will incorporate a human-rights based approach following national and international guidelines such as the International Covenant on Economic, Social and Cultural Rights as well as the Universal Declaration of Human Rights, the UN Equality Act and Aarhus Convention principles. The human rights-based approach will be achieved by encouraging equality, inclusion and participation in addressing land degradation through sustainable land management consultations, policy development, capacity building, management planning and implementation on the ground. Through the mainstreaming approach, a wide range of stakeholders will participate, including representatives from different levels of national and state governments as well as local communities and the private sector. Risks associated with all private sector engagement will be assessed in detail at PPG stage in compliance with UNDP's policy using the Private Sector Due Diligence Assessment Tool.

Given the presence of communities of indigenous people in the project landscapes, mechanisms will be identified and implemented to guarantee their meaningful, effective and informed participation throughout all elements of the project cycle, including PPG with effective FPIC. Although the PIF consultants were not able to visit the project landscapes at PIF stage due to Covid restrictions, state focal agencies led an inclusive process to select the indicative project landscapes involving NGOs, CBOs and state Government organisations, and these groups participated in both the PIF inception and validation workshops. Detailed culturally appropriate consultations with the communities themselves will be carried out during the PPG with the objective of achieving agreement (with the necessary FPIC) on any matters that may affect their rights and interests, lands, resources, territories (whether titled or untitled to the people in question) and traditional livelihoods. Any activities that may adversely affect the existence, value, use or enjoyment of indigenous lands, resources or territories shall not be conducted unless agreement has been achieved through the FPIC process.

Focus will be given towards empowering marginalized groups, including youth and women. During the PPG, a detailed stakeholder analysis and engagement plan will be prepared together with a comprehensive list of all those stakeholders who have been consulted. This analysis will capture the existing systems, languages, cultures and traditions of the FSM and the demonstration landscapes in particular. The detailed project will be designed to respect and protect these. In particular, the project design will ensure that traditional knowledge, innovations and practices of indigenous and local communities relevant for sustainable land management, and the customary use of biological resources are respected, subject to national/state legislation and relevant international obligations. A monitoring and evaluation process will be incorporated into the project design with strong local participation, enabling human-rights abuses or grievances within project activities to be addressed efficiently.

Measures will be incorporated into the project document to support the project Board, staff team, consultants and duty bearers to follow this rights-based approach. Human rights standards will be embedded within the capacity building and awareness raising of the team and local communities. Equal opportunities will be upheld within all employment that arises as a result of the project.

Particular attention will need to be given in assessing all risks and the design of management measures to take account of the consequences of the COVID-19 pandemic (or indeed other pandemics that might occur during the project lifetime). This pre-screening version of the SESP has taken full consideration of the latest GEF guidance in this regard.

Briefly describe in the space below how the project is likely to improve gender equality and women's empowerment

Land degradation and climate change have been recognized as root causes of poverty and social instability in many SIDS, and these issues can lead to domestic violence, conflict and forced migration as a result of resource scarcity and increased disaster occurrences[1]. Women are the first bearers of food and water in SIDS and are more sensitive to issues of land degradation, as they are at the forefront of facing the climate-induced impacts of sea le[2]

vel rise, coastal erosion, saline water intrusion, and depletion of fresh water and food supply[2].

Gender equality is a key Outcome for the United Nations Pacific Strategy 2018 – 2022: Outcome 2 "Gender Equality: By 2022, gender equality is advanced in the Pacific, where more women and girls are empowered and enjoy equal opportunities and rights in social, economic, and political spheres, contribute to and benefit from national development, and live a life free from violence and discrimination[3]". This project aims to contribute to women's empowerment through involvement in decision-making and support for sustainable land management and improved land management. Women's rights and participation will be monitored against defined indicators and targets throughout the project; a goal will be to score at least 2 as per the UN's Gender Marker system, meaning that the project will promote gender equality significantly[4].

Gender Equality is also a stated priority of the Government of the FSM which adopted a National Gender Policy in 2018, with National and State Action Plans to support implementation. This has supported significant progress in government and civil society to address gender issues, and all ministries and sectors share the responsibility for achieving gender equality. Traditional norms influence gender relations in different States and communities in terms of division of labour, property rights, and decision making. Key concerns include: gender inequality in waged employment and in the subsistence economy, governance, community and household positions; violence against women[5].

A comprehensive gender analysis specific to the FSM and the project's demonstration landscapes will be conducted by a Gender Specialist during the PPG. The risks and opportunities and the specific situation in each landscape will be assessed in detail and UNCCD guidance[6] will be applied to further integrate gender issues and promote gender equality into this LDN project. The analysis will determine the roles of women (and youth), identify inequalities or vulnerabilities, cultural, social, religious, and other constraints on women's potential participation and any rights issues. It will also review best practices achieved by previous initiatives, such as the effective women's groups established on Chuuk[7]. The key recommendations from this analysis will be captured in a Gender Action Plan and mainstreamed within the project framework, including the incorporation of age and sex-disaggregated data and gender statistics and specific, measurable indicators related to gender equality and women's empowerment. Already at PIF stage, gender and youth considerations have been integrated into eight of the thirteen project outcome targets. Implementation will aim to reduce gender inequalities and support rights for women in the demonstration landscapes through capacity development and female participation in consultations, awareness raising and knowledge sharing. Both women and men will be provided with equal access to advice and job opportunities. The project will adopt relevant guidelines such as those of the Convention on the Elimination of All Forms of Discrimination against Women, as well as UNDP and GEF gender policies.

Women's groups will be established to advise different aspects of the project, and female representatives and leadership positions will be enabled within project design and implementation. Opportunities and choices will be given to women that should strengthen women's rights in the wider community, households and family networks. The economic status of women, and particularly vulnerable women, will be specifically targeted through the project's work to support improved and sustainable livelihoods.

With close to 60% of the population in the FSM under the age of 25 and very limited employment opportunities in the formal economy (including reductions in the public sector due to declining Compact funding and massive challenges to the tourism sector arising from COVID-19) agriculture continues to provide subsistence livelihoods for women and young people; development of entrepreneurial skills linked to sustainable land management could offer good income earning and employment opportunities.

Briefly describe in the space below how the project mainstreams sustainability and resilience

Environmental sustainability and resilience - Despite the FSM being encompassed within the Polynesia-Micronesia global biodiversity hotspot and there being many community-managed protected areas, encroachment of farming into forests, unsustainable agriculture, and unsustainable infrastructure development are all degrading the local environment, threatening the sustainability of natural resources, ecosystem services and globally significant biodiversity. The project focuses on introducing the UNCCD approach of land degradation neutrality, and mainstreaming SLM into the agriculture and infrastructure sectors.

Social and economic sustainability and resilience – One of the main impacts of land degradation is its impact on ecosystem services, that in a largely subsistence economy such as the FSM are crucial to food and water security, reducing the risks from climate changes, and sustaining livelihoods as well as the wellbeing of local people, including diverse indigenous communities. These impacts are felt both where the land degradation occurs (eg on degraded agricultural land or land impacted by poorly designed infrastructure such as taro patches in the coastal zone), but can also impact more distant communities. For example, soil erosion in the watershed is a major threat to inshore fisheries, as it smothers and reduces the productive potential of reefs. The project will seek to protect and rehabilitate these critical ecosystem services through its focus on sustainable land management and land degradation neutrality.

During the PPG, a detailed assessment will be initiated of land degradation in the four demonstration landscapes – to be completed at the start of implementation. This will provide the basis for identifying the measures to be included in the detailed project design for avoiding, reducing and reversing the impacts of land degradation, and thereby contributing to land degradation neutrality through SLM. This will be achieved through enhanced land use planning, rehabilitation of degraded landscapes and demonstrating sustainable agriculture. Work with the infrastructure will focus on soft measures to improve their environmental performance under the guidance of the state EPAs including through enhanced regulations and standards, guidance and capacity. The project design aims to strengthen the enabling environment for LDN and SLM across all four states through improved policies, regulations, governance, capacity building, raising public awareness and improving knowledge management and sharing of best practices.

Briefly describe in the space below how the project strengthens accountability to stakeholders

The project will assist the Government of the FSM to prepare a National Action Programme to combat land degradation and put in place the LDN approach of the UNCCD according to best practice guidance for SIDS by FAO and STAP. This will include specific measures to address land degradation, as well as indicators and targets for achieving LDN. For the first time, this will ensure a strategic and targeted approach to targeting land degradation in contrast to ad hoc measures that are currently ongoing at different levels of intensity in each state. By supporting government to adopt LDN indicators and measure progress towards achieving them on a regular basis with appropriate reporting, the project will greatly enhance accountability to stakeholders, particularly the subsistence farming and fishing communities who depend on the ecosystem services that are impacted by land degradation. The project will mainstream SLM and LDN measures particularly into the agriculture and infrastructure sectors, ensuring they are accountable to government and the public for any negative impacts caused. In the demonstration landscapes, the adoption of community-based integrated landscape management plans to address land degradation, with clear actions for each responsible stakeholder and appropriate monitoring mechanisms will provide a strong mechanism for accountability. The inclusion of indicators for gender and youth in all relevant aspects of the project will ensure accountability for gender mainstreaming.

Part B. Identifying and Managing Social and Environmental Risks

QUESTION 2: What are the Potential Social and Environmental Risks? *Note: Complete SESP Attachment 1 before responding to Question 2.*	QUESTION 3: What is the level of significance of the potential social and environmental risks? *Note: Respond to Questions 4 and 5below before proceeding to Question 5*	QUESTION 6: Describe the assessment and management measures for each risk rated Moderate, Substantial or High

Risk Description *(broken down by event, cause, impact)*	*Impact and Likelihood (1-5)*	*Significance* *(Low, Moderate Substantial, High)*	*Comments (optional)*	*Description of assessment and management measures for risks rated as Moderate, Substantial or High*
Risk 1: *The introduction of new measures to address land degradation through SLM and biodiversity mainstreaming in the demonstration landscapes could affect traditional rights or access to some land and resources, potentially increasing conflict between communities and likely affecting more marginalized or vulnerable groups including indigenous peoples, leading to grievances or reprisals against those voicing them.* Principle 1: 1.4, 1.5, 1.6, 1.7, 1.13, 1.14, 1.15 Standard 5: 5.2, 5.3 Standard 6: 6.1, 6.2, 6.3, 6.4, 6.6, 6.7, 6.9	I = 3 P = 3	**Moderate**	The four states of the FSM include communities with a high diversity of distinct customs, customary laws, norms, cultural practices, languages and traditions meeting the broad UNDP definition of Indigenous Peoples. In all 4 proposed demonstration landscapes, local communities, including indigenous peoples, living within or near these areas use them for livelihoods (subsistence/small scale farming, forestry or fisheries) or have traditional rights for harvesting natural resources. Challenges already exist from migrations of communities from atoll islands as a result of climate change, and these could be exacerbated if project activities build on existing impacts or if they are not managed properly. The COVID-19 pandemic may increase the chance of such conflicts due to impacts on the local economy. Movements of people from towns back to rural areas is also occurring on the hig	**Assessment:** The process of consulting with communities in the demonstration landscapes began at PIF stage through discussions with state governments, relevant NGOs and CSOs working in the areas. However, due to the geographical logistics, Covid-19 restrictions and timescales it was not possible for the PIF design team to hold direct consultations with the affected communities. Detailed consultations with full effective and meaningful participation of the indigenous peoples concerned will therefore be made during the PPG by experts hired specifically to ensure culturally sensitive approaches; these consultations will continue iteratively throughout implementation and closure of the project. Through this process, agreement (and, where required, free prior and informed consent (FPIC)) will be obtained from communities on any project activities that may affect their rights and interests, lands or resources. The risk of not obtaining FPIC is included in Risk 4. During the PPG phase, a stakeholder analysis and extensive consultations will be undertaken by qualified socio-economic experts to discuss project activities with local and indigenous communities in all four proposed demonstration landscapes. These sites include, 1. Gagil-Tomil Island Northern Road Improvement Project in Yap state (986 ha); 2. Wichen River, Weno Island in Chuuk state (233 ha); 3. Pehleng Demonstration Landscape in Pohnpei state (885 ha); 4. Tofol and Innem Watershed in Kosrae state (1,263 ha). Land tenure varies markedly across the states but includes widespread ownership by families and clans where custom

				s also occurring on the hig h islands due to a reductio n of jobs in government. Re sistance is more likely fro m older generations. Local people are likely to b e aware of threats to natur al resources in their area. Although this risk has been categorized as Moderate a t pre-screening stage it ma y be found to be lower follo wing further assessment si nce local people in the de monstration landscapes m ay welcome new approach es, especially those that ca n reduce land degradation and bring more economic benefits.	pread ownership by families and clans where custom ary rights are followed. A comprehensive social and environmental assessme nt will be conducted during the PPG by independent s pecialists to analyze cultural traditions, socio-econom ic conditions and livelihoods in each demonstration la ndscape, with results being shared transparently. Pot ential impacts and benefits of project activities on ac cess to or use of resources (temporary or permanent) will be assessed to determine when FPIC applies in a ccordance with national contexts and preferences. **Management:** Based on the Moderate assessment of this and the current categorization of Substantial, and to ensure that the project meets the high standards re quired by UNDP and Government, preparation of an E nvironmental and Social Management Framework (ES MF) by relevant specialists has been included in the pl anning and budget for the PPG, and an ESMP will be p repared at the start of implementation with targeted E SIA as needed (i.e. if the categorization of Substantial is confirmed). At PIF stage, due to the nature and obje ctives of the project and the fact that the many peopl e in the proposed landscapes can be considered as in digenous people, it is recommended that their consid erations and needs are fully integrated into the ProDo c and stakeholder engagement plan rather than prepa ring a separate Indigenous Peoples plan. However, thi s should be given further detailed consideration at PP G stage. Given that much of land is in customary ownership an d the majority of project activities will be undertaken on these lands, the free, prior and informed consent (FPIC) of customary landowners will be required for al

				most all activities. Obtaining FPIC will be given highest priority during the PPG and implementation stages and should be aligned to raising peoples' understanding of their rights to the project interventions. There is no standard for obtaining FPIC in the FSM nor is there any national association of indigenous people, therefore, the PPG team will implement global best practices[8] to meet the three principles of FPIC: the right to be consulted; the right to participate; and the right to their lands, territories and resources. It will work with community leaders and with existing community groups formed for natural resource management to design and agree the process in each landscape for obtaining FPIC. This process will be integrated into project design such that written FPIC is obtained during the PPG phase. The comprehensive Stakeholder Engagement Plan prepared during the PPG will further define measures to ensure that the project is well informed by nominated community representatives throughout all planning and implementation phases (meeting the SES requirements for an IPP; a separate IPP is not anticipated as appropriate for this project). A comprehensive grievance redress mechanism will be co-designed with the communities during the PPG and incorporated into the ESMF together with a monitoring and evaluation process. Capacity building, raising environmental awareness and empowering community voice will also be built into the project design. Community knowledge and attitudes will be monitored and measured by a KAP survey. Measures to address land degradation through SLM and biodiversity mainstreaming will aim to incorporate and respect local and traditional knowledge, whilst at the same time offering best practice advice. Incentives for communities to transition to more sustainable land management and livelihoods will be designed during the PPG. Top-down changes will be avoided, and a

				ny adjustments to natural resource use will be design ed through informed stakeholder consultations as par t of the social and environmental assessment proces s taking into account potential cumulative impacts wi th other known existing or planned activities in the are a. This will result in the development of a Livelihoods Action Plan in Year 1 of project implementation.
Risk 2: *Women and other marginalize d groups could face discrimination, vi olence or lack voice within decisions, benefits and resources surrounding p roject design and implementation, lea ding to grievances or reprisals agains t those voicing them* Principle 1: 1.4, 1.5, 1.6, 1.7, 1.9, 1.10, 1.11, 1.12, 1.13, 1.14, 1.15	I = 3 P = 2	**Moderate**	The FSM adopted a Nation al Gender Policy in 2018, w ith National and State Acti on Plans to support imple mentation in government a nd civil society. The FSM is also an active partner in th e *Pacific Women* program me supported by the Austr alian Government[9]. Socia l and gender equity is also one of the principles of the national Agriculture Policy. However, a gender stockta ke undertaken by SPC[10] i n 2019 shows that much m ore is required - for exampl e, men outnumber women by about two to one in wag ed employment and wome n are also under-represente d in the subsistence econo my. Youth are also vulnera ble to unemployment and a bsent in decision making p rocesses. Due to existing local hierar chies, cultural practices an d traditional governance, g ender imbalances exist in a	**Assessment:** During the PPG stage, a gender speciali st will be hired to conduct a detailed assessment of s pecific local challenges and inequalities for women a nd other marginalized groups. This will determine the roles of women, identify inequalities or vulnerabilities, cultural, social, religious, and other constraints on wo men's potential participation and any rights issues. **Management:** The key recommendations from the ge nder analysis will be captured in a Gender Action Plan and mainstreamed within the project framework, inclu ding the incorporation of age and sex-disaggregated data and gender statistics and specific measurable in dicators related to gender equality and women's emp owerment. Already at PIF stage, gender and youth co nsiderations have been integrated into eight of the thi rteen project outcome targets. Implementation shoul d aim to reduce gender inequalities and support right s for women in the demonstration landscapes throug h capacity development and female participation, wit h the support of community leaders and local govern ments. Both women and men will be provided with equal acc ess to advice and opportunities, including in project g overnance mechanisms. Mechanisms will be establis hed to encourage and enable people from all marginal ized groups to take part in project design and implem entation. Knowledge sharing platforms will be develo ped in order to ensure environmental advice and proje

			ender imbalances exist in governance, community and household positions within the demonstration landscapes. Traditionally, many households are governed through matrilineal systems where ownership of land/resources is handed down through women. However, when it comes to decisions on land and natural resources use, decisions are usually done by male family members and not necessarily women. Women could therefore be marginalized within project stakeholder participation, governance arrangements, capacity building, livelihoods development, and knowledge sharing. Enabling women to have leadership positions within community decisions and increasing their financial independence could also cause tension through alterations to traditional social and decision-making structures. However, there are increasing examples of good practices and female empowerment and support may therefore be accepted positively.	ped in order to ensure environmental advice and project planning is distributed to all members of the community. - The goal for gender-rights development within the project will be Gen 2, following the UN Markers meaning that the project will promote gender equality significantly.
Risk 3: *The introduction of incentives,*	*I = 3*	**Moderate**	Financial incentive mechan	**Assessment:** During the PPG phase, a livelihoods ass

project related employment and support for sustainable land management or improved livelihoods could cause conflict if not implemented carefully and managed equitably or may support employment that fails to comply with national and international labour standards, leading to grievances or reprisals against those voicing them Principle 1: 1.5, 1.7, 1.9, 1.10, 1.11, 1.13, 1.14, 1.15 Standard 7: 7.1, 7.5, 7.6	*P = 2*		isms such as small grants have the ability to engage community support and assist the more marginalized groups; however, they also have the potential to cause conflict if they are mismanaged or change the current economic systems. Recruitment for project-related employment could also cause conflict or could contravene international labour standards. Although there has only been one confirmed case of Covid-19 in the FSM, the pandemic has greatly impacted the economy and livelihoods, impacting sectors such as tourism and transport. At the local level, it is impacting food security and livelihoods through reduction in cash flow and movement of people to rural areas causing additional pressures on natural resources	essment will be conducted to assess the current socio-economic relations within the demonstration landscapes, use of natural resources and any incentive mechanisms, based on thorough consultations with local communities. These must consider the needs and preferences of the community and ensure that they fully understand the costs and benefits of potential project interventions. This should take into account ongoing reported consequences of the Covid-19 pandemic eg on cash flow and food security. **Management:** Financial incentive mechanisms and support for enhanced / more diverse livelihoods will be planned so as not to negatively affect existing economic systems, but as additional benefits to the community as a whole, with emphasis on empowering and including marginalized groups. Mechanisms will be developed to be transparent and community owned. They will address both the negative impacts of the Covid-19 pandemic on the viability of livelihood options, and also any opportunities that may arise from the pandemic to support more sustainable and resilient livelihoods. All measures will be incorporated into a Livelihoods Action Plan to be prepared in Year 1. Project management measures will be designed to ensure that any employment developed through the project will follow national and international equal opportunity employment laws and international labour standards.
Risk 4: *The project may not effectively engage and ensure participation of all stakeholders, including women, indigenous peoples and ethnic minorities, during the project design and the implementation phases. Due to existin*	I = 4 P = 2	**Moderate**	Although literacy rates and educational standards are high in the FSM, some marginalized groups in the demonstration landscapes may not be equally represent	**Assessment:** Given the presence of communities of indigenous people in the project landscapes, mechanisms will be identified and implemented to guarantee their meaningful, effective and informed participation throughout all elements of the project cycle, with effective FPIC. Although the PIF consultants were not able

g inequalities, rights holders may not have the capacity to claim their right s. Some activities will require FPIC an d this has not yet been secured and c onsultations with local communities not commenced due to COVID-19 rest rictions. Principle 1: 1.3, 1.13			ed within the project. Wom en may not be vocal during public consultations - only when they are consulted se parately from men are they able to speak freely. This m ay hinder their capacity to give FPIC or claim their rig hts or being able to have e qual participation in the pr oject. The pre-screening risk has been categorized as Moder ate because FPIC has not y et been secured and consu ltations with local commun ities not commenced due t o COVID-19 restrictions.	to visit the project landscapes at PIF stage due to Cov id restrictions, state focal agencies led an inclusive pr ocess to select the indicative project landscapes invol ving NGOs, CBOs and state Government organisation s, and these groups participated in both the PIF incept ion and validation workshops. During the PPG phase comprehensive engagement with all stakeholders, par ticularly the communities of indigenous people in eac h of the demonstration landscapes will be undertaken to assess existing inequalities and define measures t o ensure they are addressed within the project and th at no new issues are caused. Marginalised or vulnera ble groups, such as older people, youth and women wi ll be consulted as a priority in appropriate focus group s. **Management:** As a result of the detailed consultation s to be conducted during the PPG, a comprehensive s takeholder engagement plan will be prepared as an a nnex to the project document. The project will be desi gned to raise community awareness over FPIC and rig hts as well as international human rights principles of inclusion and equality, such that written FPIC is obtain ed where required before the commencement of proje ct implementation. A grievance redress mechanism w ill be designed, and the monitoring and evaluation pro cess will be designed to record any inequalities or gri evances that arise within the project and wider comm unity, with attention being brought to the Project Boar d. Depending on existing capacities and the COVID-19 c ontext and to avoid the risk of transmissions, consult ations may be done by local (state-level) specialists, r emotely trained and supported by national or internati onal specialists.
Risk 5: *Potential*	[illegible]	**Moderate**	Members of the Project P	**Assessment:** During the PPG phase [illegible]

Risk 5: *Duty bearers may not have the capacity to uphold their duties within the project.* Principle 1: 1.2	I = 3 P = 2	**Moderate**	Members of the Project Board, project staff and consultants and government officials (national and state level) involved in the project may not have the capacity to uphold their duties regarding rights including capacity to adhere to UNDP safeguards. Capacity may be reduced as a result of conflicting demands arising as a result of the COVID-19 pandemic. Whilst the pre-screening risk has been categorized as Moderate, it may be found to be lower after further assessment.	**Assessment:** During the PPG phase, a capacity assessment of national and provincial stakeholders will be undertaken to understand current challenges relating to capacity to uphold duties, rights and safeguards, including consequences of the COVID-19 pandemic. **Management:** Based on the findings of the capacity assessment, training and capacity building will be integrated into project design in order to support duty bearers (particularly members of the Project Board, project staff and consultants and government officials) so they understand their responsibilities for human rights. Budget to address gender/ safeguards issues will be allocated as necessary such that technical support and training on gender and safeguards is provided to the PMU/Board at start of project. A monitoring and evaluation process will monitor the development of capacity within the project team and stakeholder groups.
Risk 6: *The effects of climate change such as flooding, droughts and storms could impact project areas and activities and vulnerable communities.* Standard 2: 2.1, 2.2, 2.3	I = 3 P = 3	**Moderate**	Climate change is a severe threat to low-lying coasts and ecosystems throughout the FSM due to sea level rise, storms and temperature changes. Storms can also lead to flooding and landslides from the mountains increasing the threats from land degradation. Disaster risks such as tropical cyclones are increasing in intensity and may impact on project implementation. Land degradation arising from unsustainable land uses in the agriculture and infrastructure sectors intersect close	**Assessment:** All PPG assessments will fully consider climate vulnerability by adopting local and expert advice over areas most at risk as well as communities or livelihoods that could be affected. An initial climate risk screening has been undertaken at PIF stage and will be completed during the PPG, considering the intersection with threats from land degradation in the agriculture and infrastructure sectors. A separate pre-screening climate change assessment was undertaken for the PIF (see risks section) and will be detailed in full during the PPG. **Management:** Project design will take into account the results of the assessment and fully integrate climate change mitigation and adaptation measures through sustainable land management, livelihoods, capacity building and awareness. Demonstrations on the grou

			ture sectors interact closely with threats from climate change. The COVID-19 pandemic may also exacerbate this risk. Planned project activities should contribute towards the mitigation of and adaptation to climate change impacts on the vulnerability of communities through improved natural resources management and avoid the potential for maladaptive practices.	building and awareness. Demonstrations on the ground will show how avoiding, reducing and reversing land degradation can be a key tool in addressing climate change impacts.
Risk 7: *The project could have unintended impacts on valuable natural habitats, globally threatened or endemic species, or production systems if activities are improperly executed, e.g. measures to rehabilitate degraded land or introduce sustainable agriculture or infrastructure could lead to increased erosion risk, poor habitat management could lead to risks to threatened species if habitat needs/requirements not met.* It c*ould also contribute to cumulative environmental or social impacts in the area through unintended negative consequences from policy or legislative changes.* Standard 1: 1.1, 1.2, 1.3, 1.4, 1, 1.6, 1.7, 1.8, 1.9, 1.10	I = 3 P = 2	**Moderate**	The project aims to avoid, reduce and reverse the impacts of land degradation. Therefore, environmental impacts are expected to be positive. However, there is a possibility that sustainable land management measures or policy (eg. the National Action Programme to combat land degradation) or legislative changes may negatively impact important biodiversity or communities, for example through the use of non-native species for tree planting or measures to control non-native invasives.	**Assessment:** During the PPG, Environmental, SLM and Safeguards specialists will be hired to carry out a full assessment of current and any possible new negative environmental impacts arising from the project, particularly relating to the demonstration landscapes and to proposed SLM and livelihoods enhancement measures, including policy and legislative changes. **Management:** The project design will ensure that new and existing threats to biodiversity from land degradation are avoided, reduced and reversed. Mainstreaming of SLM into particularly the agriculture and infrastructure sectors under Component 1 will follow the Strategic Environmental and Social Assessment (SESA) approach. The project document will specifically state that SESA will be applied to all new policies and legislation/regulations prior to approval by Government and this will be built into detailed project design and budgeting as needed. Under demonstration activities in Component 3, the project document will specifically state that no non-native species will be used for SLM, re-f

				orestation or for livelihoods development. Control me thods for IAS (if proposed) will require prior approval by Government and will take place under clear SOPs a nd management plans, with consideration of potential environmental and social impacts. Measures such as management or rehabilitation plans will ensure compl iance with regulations and follow international best pr actices to avoid negative impacts on natural habitats, globally threatened or endemic species, or production systems.This will all be reflected in the ESMF prepare d during the PPG, and in the project's design to the ext ent appropriate and feasible.
Risk 8: *Measures to reduce or reverse land degradation may be hazardous f or the project team, officials and pose potential risks to community health, c ould exacerbate risks of erosion and l andslides (posing safety risks to com munities), and may not comply with b est practice health and safety standar ds.* Standard 3: 3.1 3.2, 3.4, 3.6, 3.7 Standard 7: 7.1, 7.5, 7.6	I = 3 P = 2	Moderate	Improperly designed meas ures to reduce or reverse la nd degradation through SL M could exacerbate potenti al risk of erosion or landsli des which could result in s afety impacts on communi ties. Where IAS are causing land degradation, chemical s or physical methods use d to manage them may be t oxic or dangerous and som e IAS may be poisonous or lead to skin irritations. Institutions may fail to com ply to national and internati onal safety standards and community members or go vernment officials or projec t staff participating in SLM may not be adequately trai ned or equipped to address H&S concerns.	Assessment: During the PPG phase a Safeguards spe cialist will be given the task of assessing this risk in d etail, identifying risk areas and vulnerable stakeholder s. The analysis will also consider existing safety guide lines and their application as well as knowledge of saf ety procedures and capacity to follow them. Management: If found to be necessary, the PPG asse ssment will result in the development of a targeted He alth and Safety Plan and/or Labour Management Proc edures (or those requirements will be noted in the ES MF, for preparation during implementation) including standard operating procedures for safe working. Guid elines will be developed at the start of the project as n eeded, safety equipment will be provided (eg. PPE) an d staff and local communities will be trained around i dentified risks and how to manage them. Regular safe ty checks will be built into the project design, with a pr oject staff member responsible and trained for overse eing H&S.
Risk 9: *The proposed project may res*	I = 3	Moderate	The FSM boasts a wealth o	Assessment: During the PPG phase a Safeguards spe

Risk 9: *The proposed project may result in interventions in the demonstration landscapes that would potentially adversely impact sites, structures, or objects with historical, cultural, artistic, traditional or religious values or intangible forms of culture (e.g. knowledge, innovations, practices).* Standard 4: 4.1, 4.3, 4.4, 4.5	I = 3 P = 2	**Moderate**	The PCM boasts a wealth of historical and traditional sites, many of which are of great significance to the people. Few sites have formal preservation or management in place, and many sites are not documented. Traditional agricultural practices and products (including yam, sakau, breadfruit, taro and pigs) are important for ceremonial purposes and gifting which helps cement social bonds. The proposed integrated management plans and SLM interventions to tackle land degradation proposed under Component 3 may impact cultural sites or intangible forms of culture.	**Assessment:** During the PPG phase a safeguards specialist will be hired to assess this risk in detail, identifying risk areas and vulnerable cultural heritage in each demonstration landscape. **Management:** If found to be necessary, guidelines for safeguarding cultural heritage will be developed at the start of the project and staff, consultants and government officers will be trained around risks to cultural heritage. This will be reflected in the ESMF prepared during the PPG, and in the project's design as feasible and appropriate.
Risk 10: *Measures to address unsustainable agriculture and infrastructure may create hazardous waste or cause environmental pollution. Due diligence also needs to be completed to ensure there are no enhanced safeguards risks from working with any private sector organisations with whom the project may cooperate to support LDN/SLM activities.* Standard 8: 8.1, 8.2	I = 3 P = 2	**Moderate**	Developing new regulations or standards and providing advice and training to reduce the land degradation impacts of the agriculture and infrastructure sector may have unintended consequences, create hazardous waste or cause pollution by seeping into water courses.	**Assessment:** During the PPG phase SLM experts to cover both the agriculture and infrastructure sectors will be hired to assess this risk in detail. The analysis will consider existing and proposed environmental regulations, standards and guidelines and their application as well as knowledge of standard operating procedures and capacity to follow them. Development of private sector partnerships will be allocated to one of the PPG consultants. Potential private sector partners and related activities (including co-financing) will be confirmed during the PPG phase. Eac

			Institutions may fail to comply to national and international environmental safety standards. The project aims to engage the private sector in line with GEF expectations. Potential partners identified at PIF stage include: farmers (small and large), traders and local food vendors, processors, exporters/importers, farmers associations (eg Yap, Pohnpei), farmers cooperatives (eg. Island Food Community of Pohnpei), State Chambers of Commerce, Media eg. Kaselehlie Press, C4Life Initiative, Vital's (national energy supplier) Coconut for Life programme, utilities, construction organisations. Due diligence has not yet been completed with these private sector partners to confirm they adhere to UNDP expectations on exclusionary criteria, potential controversies and commitment to ESG, and that any potential risks can be managed through conditions.	h will be subject to completion of due diligence, including use of UNDP Private Sector Risk Assessment Tool. **Management:** If found to be necessary, the PPG assessment will recommend the development of a targeted plan for reducing the impacts of measures to address unsustainable agriculture and infrastructure, including standard operating procedures to reduce environmental and social risks (to be prepared in Year 1 of the project). Partnership agreements will be detailed and established with each private sector partner during the PPG phase, or prior to the start of any partnership working. Such agreements will be fully compliant with UNDPs private sector partnerships policy including any conditions according to the findings of UNDP Private Sector Risk Assessment Tool.
Risk 11: PPG team/project or UNDP staff/consultants travelling to the FSM and demonstration land/seascapes could increase risk of COVID-19 spread	I = 4 P = 2	**Moderate**	There has only been one confirmed case of COVID 19 in the FSM since the WHO declared a pandemic in ear	**Assessment:** Detailed assessment of this risk should be undertaken by UNDP prior to the initiation of the PPG and full implementation stages of the project.

if pandemic is prolonged or if a differ ent pandemic emerges during the pro ject's lifetime. Standard 3: 3.4, 3.7			ly 2020. However, such cas es may emerge before or d uring the PPG or implemen tation phase, or a different pandemic may emerge. Th ere would therefore be sign ificant consequences if tra nsmission occurred by proj ect consultants or project or UNDP staff visiting the c ountry or moving between i slands.	**Management:** Assuming the pandemic continues at le ast through the PPG stage, it is likely that PPG activiti es will have to be undertaken by national consultants, supported remotely by international specialists and e xternal UNDP staff. The potential for inter-island trans mission will be reduced by the project including a hig h degree of devolution of implementation responsibili ty to state level (ie working through state coordinator s) Should there be a relaxation on travel restrictions in th e future that might allow international specialists to p articipate in full implementation of the project or inde ed movements of locals between states; international ly recognized biosecurity standards will need to be fol lowed.

	QUESTION 4: What is the overall project risk categorization?		
	Low Risk	☐	
	Moderate Risk	☐	
	Substantial Risk	X	This pre-screening assessment has identified 11 risk s, all of which have been scored as Moderate. Due to the large number and varied range of Moderate risks t hat will require more extensive assessment and mana gement measures, the project has been given an over all categorization of **Substantial Risk.** All principles an d standards are triggered by this SESP pre-screening. During the PPG phase, the risks will be reviewed in de tail and adjusted/expanded to align with the full desig n of the project, including their risk scores and manag ement measures.

			Along with additional risk/impact assessments, the risks identified at pre-screening confirm the need for the preparation of the following during the PPG phase: · ESMF · Stakeholder analysis and comprehensive Stakeholder Engagement Plan incorporating FPIC · Gender Analysis and Action Plan · Livelihoods analysis · Capacity assessments · Initial climate risk screening · Identification and commencement of FPIC process · UNDP Private Sector Risk Assessment process for any identified private sector partners including co-financers · Definition of project Grievance Redress Mechanism. At pre-screening stage, it is not envisaged that a separate Indigenous Peoples plan is required, and this will instead be integrated into the Project Document (which will form the IPP) and comprehensive stakeholder engagement plan.
	High Risk	☐	

	QUESTION 5: Based on the identified risks and risk categorization, what requirements of the SES are triggered? (check all that apply)				
	Question only required for Moderate, Substantial and High Risk projects				
	Is assessment required? (check if "yes")	X			***Status? (completed, planned)***

if yes, indicate overall type and status		X	Targeted assessment(s)	Planned for PPG
		X	ESIA (Environmental and Social Impact Assessment)	Planned for implementation (scoped ESIAs)
		X	SESA (Strategic Environmental and Social Assessment)	Planned for implementation
Are management plans required? (check if "yes)	X			
If yes, indicate overall type		X	Targeted management plans (e.g. Gender Action Plan, Emergency Response Plan, Waste Management Plan, others)	Planned for PPG
		X	ESMP (Environmental and Social Management Plan which may include range of targeted plans)	Planned for implementation (scoped ESMPs)
		X	ESMF (Environmental and Social Management Framework)	Planned for PPG
Based on identified risks, which Principles/Project-level Standards triggered?		**Comments (not required)**		
Overarching Principle: Leave No One Behind				
Human Rights	X	Risk 1 Risk 2 Risk 3 Risk 4 Risk 5		
Gender Equality and Women's Empowerment	X	Risk 2		
		Risk 1		

	Accountability	X	Risk 1 Risk 2 Risk 3 Risk 4 Risk 5
	1. Biodiversity Conservation and Sustainable Natural Resource Management	X	Risk 7 Risk 8
	2. Climate Change and Disaster Risks	X	Risk 6
	3. Community Health, Safety and Security	X	Risk 8 Risk 11
	4. Cultural Heritage	X	Risk 9
	5. Displacement and Resettlement	X	Risk 1
	6. Indigenous Peoples	X	Risk 1
	7. Labour and Working Conditions	X	Risk 3 Risk 8
	8. Pollution Prevention and Resource Efficiency	X	Risk 10

[1] http://www.fao.org/policy-support/tools-and-publications/resources-details/en/c/1273768/

[2] file:///C:/Users/Owner/Downloads/Intergratinggender%2520in%2520disaster%2520managment%2520in%2520SID.pdf

[3] United Nations Pacific Strategy 2018 – 2022. https://www.unicef.org/about/execboard/files/Final_UNPS_2018-2022_Pacific.pdf

[4] UNDP Gender Equality Strategy 2018-2021 https://www.undp.org/content/dam/undp/library/gender/UNDP%20Gender%20Equality%20Strategy%202018-2021.pdf

[5] https://pacificwomen.org/wp-content/uploads/2017/09/FSM-gender-stocktake.pdf

[6] https://catalogue.unccd.int/1223_Gender_Manual.pdf

[7] https://www.tandfonline.com/doi/abs/10.1080/17441692.2020.1751231

[8] For example, https://www.unredd.net/documents/redd-papers-and-publications-90/other-sources-redd-papers-and-publications/fpic-841/15866-free-prior-and-informed-consent-an-indigenous-peoples-right-and-a-good-practice-for-local-communities-manual-for-project-practitioners.html

[9] https://www.dfat.gov.au/sites/default/files/pwspd-fsm-summary.docx

[10] https://www.spc.int/sites/default/files/wordpresscontent/wp-content/uploads/2017/03/web_2-FSM_gender_stocktake.pdf

Supporting Documents

Upload available ESS supporting documents.

Title	Submitted
PIMS 6567 GEF7-FSM-SESP__020821	

Part III: Approval/Endorsement By GEF Operational Focal Point(S) And GEF Agency(ies)

A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S): (Please attach the Operational Focal Point endorsement letter with this template).

Name	Position	Ministry	Date
Andrew Yatihnan	Secretary / GEF Operational Focal Point	Department of Environment, Climate Change and Emergency Management	10/12/2021

ANNEX A: Project Map and Geographic Coordinates

Please provide geo-referenced information and map where the project intervention takes place

Based on application of the selection criteria (see below), four candidate project landscapes have been identified by the states at PIF stage through consultations with multiple stakeholders and confirmation at the PIF validation workshop. They are:

1. Gagil-Tomil Island Northern Road Improvement Project in Yap state (986 ha)
2. Wichen River, Weno Island in Chuuk state (233 ha)
3. Pehleng Demonstration Landscape in Pohnpei state (885 ha)
4. Tofol and Innem Watershed in Kosrae state (1,263 ha)

The selection criteria that were used for identification of these landscapes, and the indicative scores (to be confirmed during PPG phase) were as follows:

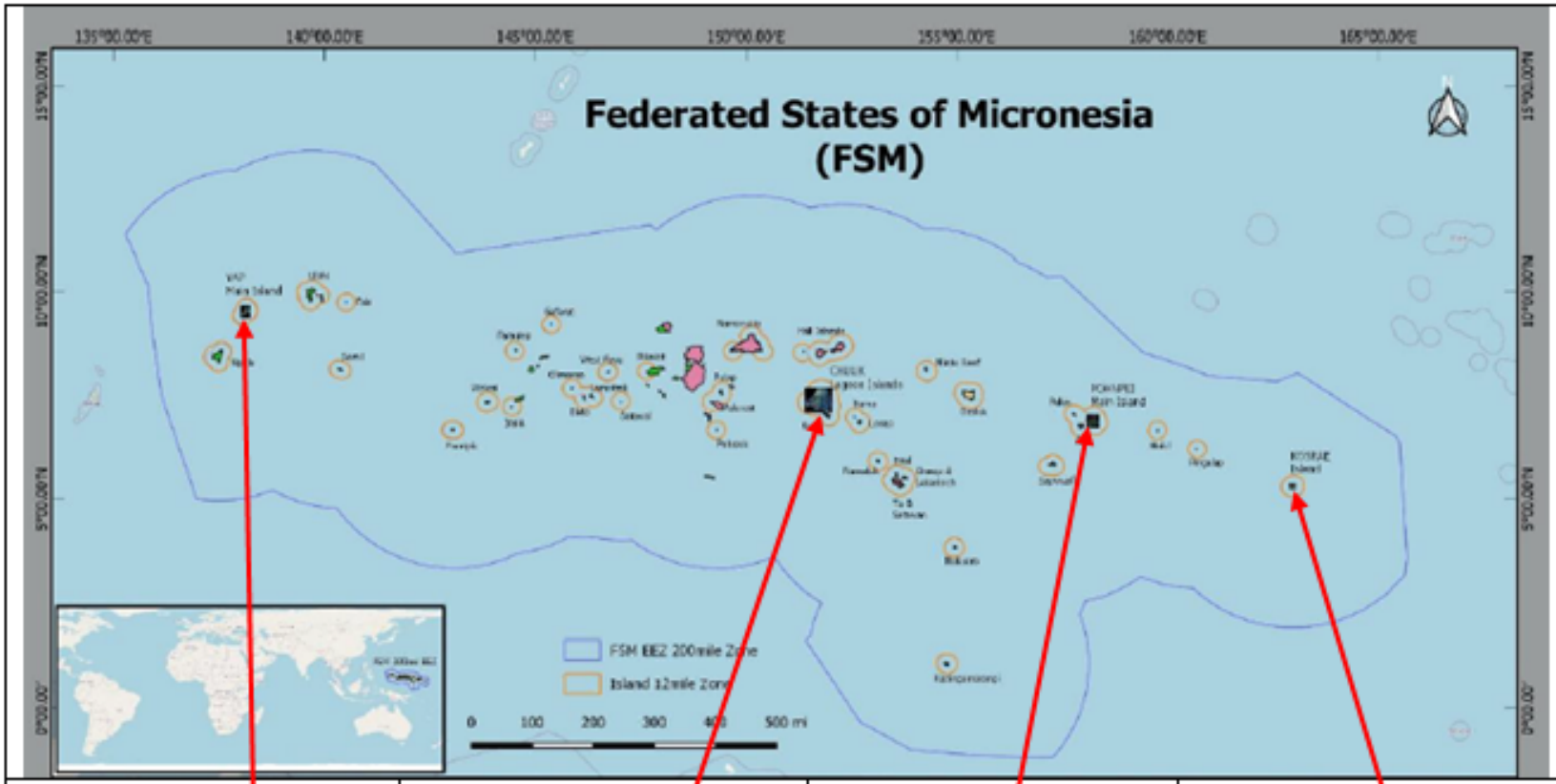
Selection Criteria	Score (0-5)*			
State	Yap	Chuuk	Pohnpei	Kosrae
1. Land degradation is occurring (or at high risk of occurring) from unsustainable agriculture and/or infrastructure development	5	5	5	5
2. Potential to address land degradation and its drivers (collaboration with agriculture or infrastructure sector) to achieve multiple benefits (carbon, biodiversity, water, livelihoods …. resilience)	5	5	3	5
3. Clear land tenure arrangement (state and/or private) / few land disputes	4	3	5	4
4. Critical ecosystem services threatened by land degradation	5	5	5	5
5. Existing community-based management initiatives / groups	5	5	3	4
6. Part of a Key Biodiversity Area (KBA)/critical ecosystem / Protected area (s)	5	5	3	4
7. Endemic, threatened or keystone species or habitats	4	5	5	4
8. Ecosystem-based delineation (watershed or coastal zone area)	4	5	4	5
9. State government and community support	5	4	3	3
10. Potential for co-financing from State, other projects and private sector partnerships	2	5	5	5
11. Feasibility of project execution and implementation efficiency (area, access and costs)	5	4	4	4

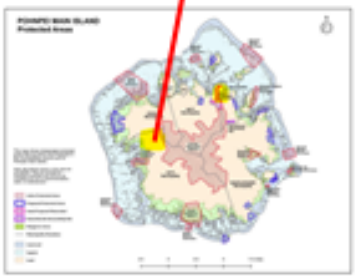
* 0 = does not match this criterion; 5 = Fully matches this criterion

The project landscapes will be confirmed during PPG through detailed consultation with local stakeholders and confirmation of their willingness to participate in the project (including securing FPIC as needed). Detailed information will be collected on the social, environmental and economic baseline and the intervention areas will be delineated and geographic coordinates provided. Initial information and map are provided below.

Brief description of the proposed landscapes

PROGRAM/PROJECT MAP AND GEOGRAPHIC COORDINATES



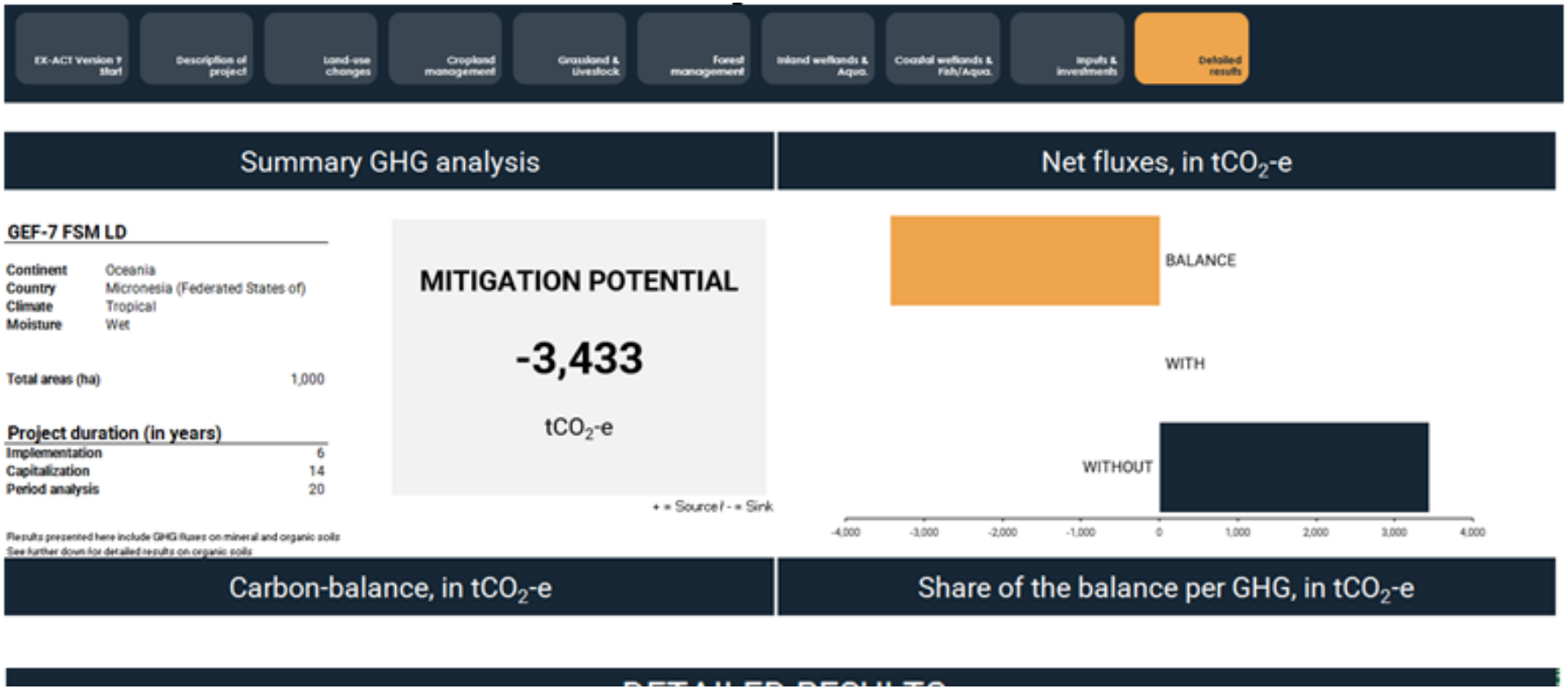
Yap: Gagil-Tomil Island Northern Road Improvement Project	Chuuk: Wichen River	Pohnpei -Pehleng Demonstration Landscape	Kosrae -Tofol and Innem Watershed
			

The designations employed and the presentation of material on this map do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations or UNDP concerning the legal status of any country, territory, city or area or its authorities, or concerning the delimitation of its frontiers or boundaries.

Annex B: GEF 7 Core Indicator Worksheet

Annex C: Project Taxonomy Worksheet

Annex D. Details on tCO2e estimates and assumptions



DETAILED RESULTS

Project nam	GEF-7 FSM LD						
Continent	Oceania	**Project duration (in years)**		**Total area (h**	1,000	**Global warming potential**	
Country	Micronesia (Federated States of)	Implementation	6	Mineral soil	1,000	CO_2	1
Climate	Tropical	Capitalization	14	Organic soil	0	CH_4	34
Moisture	Wet	Period analysis	20	Waterbodies	0	N_2O	298

PROJECT COMPONENTS		GROSS FLUXES (In tCO_2/yr over the whole period analysis) WITHOUT	WITH	BALANCE	SHARE PER GHG OF THE BALANCE (In tCO_2/yr over the whole period analysis) CO_2 BIOMASS	CO_2 SOIL	N_2O	CH_4	ALL NON-AFOLU EMISSIONS*	AVERAGE ANNUAL EMISSIONS (In tCO_2/yr) WITHOUT	WITH	BALANCE
Land use changes	Deforestation	0	0	0	0	0	0	0		0	0	0
	Afforestation	0	0	0	0	0	0	0		0	0	0
	Other land-use	0	0	0	0	0	0	0		0	0	0
Cropland	Annual	0	0	0	0	0	0	0		0	0	0
	Perennial	0	0	0	0	0	0	0		0	0	0
	Flooded rice	0	0	0	0	0	0	0		0	0	0
Grasslands & Livestock	Grasslands	0	0	0	0	0	0	0		0	0	0
	Livestock	0	0	0			0	0		0	0	0
	Forest mngt.	3,433	0	-3,433	-3,433	0	0	0		172	0	-172
	Inland wetlands	0	0	0	0	0	0	0		0	0	0
	Coastal wetlands	0	0	0	0	0	0	0	0	0	0	0
	Inputs & Invest.	0	0	0		0	0		0	0	0	0
Total emissions, tCO_2-e		**3,433**	**0**	**-3,433**	**-3,433**	**0**	**0**	**0**	**0**	**172**	**0**	**-172**
Total emissions, tCO_2-e/h		**3.4**	**0.0**	**-3.4**	**-3.4**	**0.0**	**0.0**	**0.0**	**0.0**			
Total emissions, tCO_2-e/h		**0.2**	**0.0**	**-0.2**	**-0.2**	**0.0**	**0.0**	**0.0**	**0.0**			

+ - Source / + - Sink

Results presented here include GHG fluxes on mineral and organic soils

See further down for detailed results on organic soils

*Includes fisheries, aquaculture and inputs & investments that are not included in the AFOLU definition.

Mineral/Organic Soil	tCO_2-e/yr	Percent
Without	172	100%
With	0	0%
Balance	-172	100%

Landscape name / area (ha)	Environmental significance, threats and focus of project interventions
1. Gagil-Tomil Island Northern Road Improvement Project in Yap state (986 ha)	Environmental significance · Area of Biological Significance containing important habitats: agroforests, watersheds, mangroves, lagoons and submerged reefs. Extensive areas of degraded savannah. · Critical ecosystem services provided by watersheds, rivers streams, mangroves, MPAs (3), bird sanctuaries; largest watershed and aquifer which supplies fresh drinking water to most households in northern Yap · Agro-forests are community effectively managed areas · Endemic and Red List species

	· Historical sites **Threats** · Land erosion and sedimentation into valuable habitats. Deforestation. Raising livestock · Excavation, bulldozing, and earth moving activities (culverts, bridges and new secondary roa ds will be built during road construction) · Invasive alien species: Little Fire Ants (LFA); Tilapia fish · Mudslides due to uprooted trees, shrubs and grasses. Poor quality of soil due to removed to p soils, leakage of oil, or other toxic chemicals used in construction. · Impacts on valuable ecosystem services: Reduced crop production, fish and other marine sp ecies. **Focus of project interventions** · Land use planning to address increasing population and traditional land governance mechan isms · Rehabilitation of natural habitats (mangroves, Nippa and timber trees, fruit trees, taro patche s, watersheds, riparian areas etc · SLM: composting, dry litter piggeries etc · Sustainable infrastructure methods to protecting watersheds, rivers/streams and shorelines.
2. Wichen Rive r, Weno Island in Chuuk state (233 ha)	**Environmental significance** · Area of Biological Significance - diverse mix of tropical forest, freshwater and coastal ecosy stems. No protected areas. · Spawning site/nursery for freshwater shrimps, eels, and diverse marine species (i.e., bonito s, mud clams, etc.) · Endemic and IUCN Red List species - Freshwater shrimps, eels, etc · Historic site (petroglyph) **Threats** · High risk of environmental degradation due to pollution, erosion/sedimentation, improper lan dfill, and fragmentation of forest.

	· Unsustainable agriculture (slash and burn, fragmentation) · Unsustainable infrastructure (landfilling and conversion) · Invasive alien species · Indirect impacts of climate change affecting food crops. **Focus of project interventions** · Land use (spatial) planning and management and policy response to solve conflicting land u ses · Re-vegetation of indigenous and mangrove plants · Stopping forest encroachment, limiting vegetation clearance, support composting activities and solid waste management; restore taro patches · Protect water quality and erosion through water sensitive infrastructure design and control o f sedimentation in lagoons · Gender mainstreaming and private sector engagement
3. Pehleng De monstration L andscape in P ohnpei state (8 85 ha)	**Environmental significance** · Area of Biological Significance including cloud and palm forest, riparian habitats, mangroves and other wetlands, overlapping to a small extent with the Watershed Forest Reserve · Endemic and IUCN Red List species · Supplies critical ecosystem services including water quality and quantity, soil and biodiversit y conservation and livelihoods **Threats** · Destructive commercial mono-cropping of sakau, lack of proper livestock waste manageme nt · Illegal earth moving activities (road construction, land clearing and landfills) · Soil erosion and pollution (poor management of solid waste and liquid waste) **Focus of project interventions** · Improvements to Pohnpei state and develop local land use plan · Restoration of natural habitats – forests, mangroves, wetlands · Sustainable agroforestry (composting, mixed cropping, indigenous varieties etc), dry litter pi

	· Sustainable agroforestry (composting, mixed cropping, indigenous varieties etc), dry litter piggeries · Value-added products and marketing working with farmer associations · Collecting / processing of green waste at the community level to improve soil fertility · Addressing impacts from infrastructure – secondary roads etc
4. Tofol and Innem Watershed in Kosrae state (1,263 ha)	**Environmental significance** · Area of Biological Significance identified in NBSAP including upland forests, freshwater wetlands, agro-forests, and coastal wetlands (mangroves, lagoons, reefs), including 3 community-managed MPAs · Historical sites · Endemic and IUCN Red List species **Threats** · Expansion of development, for government projects including agricultural activities and resources exploitation (mangrove harvesting) · Infrastructure: proposed cross island road from Innem to Okat, quarrying activities · Pollution from government offices and residential buildings · Unsustainable agriculture practices by the State and private landowners using chemical fertilizers and pesticides are impacting coastal ecosystems · Marine and terrestrial IAS **Focus of project interventions** · Tofol and Innem Watershed management plan and community governance · Rehabilitation of freshwater wetlands and mangrove forest; control invasive species. · Convert conventional pigpens into dry litter piggeries; reduce leachate from Tofol Fukuoka Landfill; underwater clean-up of the Lelu harbour and coastal areas · Refurbish tree nursery; conduct community tree planting and promote green belt · Capacity building and awareness

Key Assumptions in tCO2eq Estimates
· The estimate includes avoided forest degradation through uptake of sustainable land management practices, which is expected to result in an avoided shift in degradation from Very Low to Low or Low to Moderate degradation on 1,000 ha (56.1% of the total ha forested area in demonstration landscapes not under agroforestry). · Note that: 1) No impact due to avoided forest loss from agricultural incursion has been counted at PIF stage due to lack of information, assuming this will take place via incremental impacts resulting in a shift to a higher degradation status rather than materializing as forest loss; 2) No estimates of GHG impact through improvement in agroforestry systems, nor for coastal wetlands through adoption of SLM has been calculated at this stage due to limited information. Further calculations will be completed during the PPG phase as activities and project landscapes are defined, with a conservative GHG co-benefit scenario used at PIF stage. · The benefit from the project is estimated for a 20-year (6 years of implementation plus 14 years of capitalization) period. · The anticipated start year for the GHG benefit accounting is year 2023