Part I: Project Information

GEF ID
10907

Project Type
MSP

Type of Trust Fund
GET

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

Project Title
Facilitating biodiversity conservation by enhancing aquaculture policy, planning, management, and production

Countries
Palau

Agency(ies)
UNEP

Other Executing Partner(s)
Government of Palau (Ministry of Agriculture, Fisheries and the Environment (MAFE))

Executing Partner Type
Government

GEF Focal Area
Biodiversity

Sector

Taxonomy
Focal Areas, Biodiversity, Mainstreaming, Ceritification - International Standards, Fisheries, Protected Areas and Landscapes, Productive Landscapes, Species, Threatened Species, Illegal Wildlife Trade, Wildlife for

Sustainable Development, Biomes, Coral Reefs, Sea Grasses, Climate Change, Climate Change Adaptation, Climate resilience, Sea-level rise, Small Island Developing States, Mainstreaming adaptation, International Waters, Large Marine Ecosystems, Acquaculture, Seagrasses, Influencing models, Demonstrate innovative approache, Strengthen institutional capacity and decision-making, Transform policy and regulatory environments, Stakeholders, Local Communities, Type of Engagement, Consultation, Participation, Partnership, Information Dissemination, Beneficiaries, Civil Society, Community Based Organization, Non-Governmental Organization, Private Sector, SMEs, Individuals/Entrepreneurs, Gender Equality, Gender results areas, Access to benefits and services, Knowledge Generation and Exchange, Capacity Development, Participation and leadership, Awareness Raising, Access and control over natural resources, Gender Mainstreaming, Women groups, Sex-disaggregated indicators, Gender-sensitive indicators, Integrated Programs, Food Systems, Land Use and Restoration, Sustainable Food Systems, Smallholder Farming, Capacity, Knowledge and Research, Enabling Activities, Innovation, Learning, Indicators to measure change, Theory of change, Adaptive management, Knowledge Exchange, Knowledge Generation

Rio Markers

Climate Change Mitigation

Significant Objective 1

Climate Change Adaptation

No Contribution 0

Biodiversity

Principal Objective 2

Land Degradation

Submission Date

3/8/2023

Expected Implementation Start

10/1/2023

Expected Completion Date

9/30/2027

Duration

48In Months

Agency Fee($)

139,652.00

A. FOCAL/NON-FOCAL AREA ELEMENTS

Objectives/Programs	Focal Area Outcomes	Trust Fund	GEF Amount($)	Co-Fin Amount($)
BD-1-1	Mainstream biodiversity across sectors as well as landscapes and seascapes through biodiversity mainstreaming in priority sectors	GET	1,470,021.00	8,372,646.00
		Total Project Cost($)	**1,470,021.00**	**8,372,646.00**

B. Project description summary

Project Objective

to strengthen aquaculture policy, planning, management, and production to protect and enhance marine biodiversity in Palau through an ecosystem approach

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing ($)	Confirmed Co-Financing ($)

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing ($)	Confirmed Co-Financing ($)
1. Enabling a supporting policy environment for development of Sustainable Aquaculture in Palau	Technical Assistance	*1. Strengthened legal and institutional frameworks for Sustainable Aquaculture,* as indicated by: **Increased number of policies/strategies/laws for Sustainable Aquaculture endorsed/implemented by the Government of Palau in the project framework**. *Baseline: 0; Target: >=4* **Presence of the National Sustainable Aquaculture Development Plan endorsed by the Government of Palau**. *Baseline: 0; Target: 1;* **Operational national aquaculture site selection, permitting, and environmental monitoring framework based on EAAM.**	**1.1.** National policy and legislation updated to integrate Ecosystem Approach to Aquaculture Management (EAAM); **1.2.** National Sustainable Aquaculture Development Plan based on the Ecosystem Approach to Aquaculture Management (EAAM) is produced and endorsed by MAFE; **1.3.** MAFE has a comprehensive aquaculture site selection, permitting, and environmental monitoring framework based on GIS database for Ecosystem	GET	357,362.00	1,595,000.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing ($)	Confirmed Co-Financing ($)
		Baseline: 0; Target: 1	Approach to Aquaculture Management (EAAM);			
"	Investment	"	"	GET	40,000.00	

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing ($)	Confirmed Co-Financing ($)
2. Developing national capacity for Ecosystem Approach to Aquaculture Management (EAAM)	Technical Assistance	*2. Strengthened national capacity for Sustainable Aquaculture that contributes to conservation of marine biodiversity,* as indicated by: **Total number of aquaculture farms (and farmers) practicing National EAAM Farming Standard**: *Baseline: 0; Target ? >=15 farms/20 farmers (20% are women);* **Increased number of government officers that have sufficient skills on the aquaculture site selection, permitting, and environmental monitoring in accordance with the National EAAM Farming Standard**: *Baseline: 0; Target - 50 (30% are women);* **Increased area of marine habitat under improved management**	**2.1.** National Ecosystem Approach to Aquaculture Management (EAAM) Farming Standard is introduced to controlling government agencies and aquaculture farmers through a training program; **2.2.** Bureau of Fisheries (BoF) has a lab for development of sustainable aquaculture approaches and environmental monitoring of aquaculture farms; **2.3.** Ecosystem Approach to Aquaculture Management (EAAM) hatcheries are	GET	264,000.00	5,477,646.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing ($)	Confirmed Co-Financing ($)
		through sustainable aquaculture: *Baseline: 0 ha; Target- 1,200 ha directly;25,500 ha indirectly*	established in Palau			
"	Investment	"	"	GET	435,621.00	
3. Knowledge management, gender mainstreaming, and monitoring and evaluation	Technical Assistance	*3. Lessons learned by the project are applied nationally and internationally for promotion of Sustainable Aquaculture,* as indicated by: **Total number of best practices and lessons learned by the project on sustainable aquaculture that are applied by other projects in Palau and abroad**: *Baseline: 0; Target: >=4;* **Total number of direct project beneficiaries:** *Baseline: 0; Target: >=360 (at least 30% women)*	**3.1.** Participatory M&E, communication, and gender mainstreaming framework developed and implemented for the project; **3.2.** Lessons learned from the project are shared nationally and internationally to promote EAAM	GET	239,400.00	500,000.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing ($)	Confirmed Co-Financing ($)
				Sub Total ($)	**1,336,383.00**	**7,572,646.00**
Project Management Cost (PMC)						
				GET	133,638.00	800,000.00
				Sub Total($)	**133,638.00**	**800,000.00**
				Total Project Cost($)	**1,470,021.00**	**8,372,646.00**

Please provide justification

N/A

C. 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($)
Recipient Country Government	Ministry of Agriculture, Fisheries, and Environment	In-kind	Recurrent expenditures	5,800,000.00
Recipient Country Government	Office of the Palau Automated Land and Resources Information System (PALARIS)	In-kind	Recurrent expenditures	20,000.00
Recipient Country Government	National Development Bank of Palau (NDBP)	Loans	Investment mobilized	500,000.00
Recipient Country Government	Ngatpang State Government	In-kind	Recurrent expenditures	260,000.00
Recipient Country Government	Ngchesar State Government	In-kind	Recurrent expenditures	60,000.00
Private Sector	Palau Aquaculture Alliance	In-kind	Recurrent expenditures	500,000.00
Private Sector	Palau Aquaculture Cooperative Association (PACA)	In-kind	Recurrent expenditures	500,000.00
Civil Society Organization	The Nature Conservancy	In-kind	Recurrent expenditures	300,000.00
Civil Society Organization	Palau International Coral Reef Center (PICRC)	In-kind	Recurrent expenditures	432,646.00
			Total Co-Financing($)	**8,372,646.00**

Describe how any "Investment Mobilized" was identified

The co-financing secured represents US$ 7,872,646 of recurrent expenditures (94%) and US$ 500,000 of the investment mobilized (6%). Investment mobilized represents parallel investments and allocations from the entities indicated in the table above: ? NDBP will provide loans to community aquaculture farms and aquaculture companies for development. 99.7% value of cofinance anticipated at the Concept (PIF) stage has been realized.

D. 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($)
UNEP	GET	Palau	Biodiversity	BD STAR Allocation	1,470,021	139,652	1,609,673.00
			Total Grant Resources($)		**1,470,021.00**	**139,652.00**	**1,609,673.00**

E. Non Grant Instrument

NON-GRANT INSTRUMENT at CEO Endorsement

Includes Non grant instruments? **No**

Includes reflow to GEF? **No**

F. Project Preparation Grant (PPG)

PPG Required **true**

PPG Amount ($)

50,000

PPG Agency Fee ($)

4,750

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount($)	Fee($)	Total($)
UNEP	GET	Palau	Biodiversity	BD STAR Allocation	50,000	4,750	**54,750.00**
				Total Project Costs($)	**50,000.00**	**4,750.00**	**54,750.00**

Core Indicators

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)
25,500.00	26,700.00		

Indicator 5.1 Fisheries under third-party certification incorporating 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 Large Marine Ecosystems with reduced pollution 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 Marine OECMs supported

Name of the OECMs	WDPA-ID	Total Ha (Expected at PIF)	Total Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)

Indicator 11 People benefiting from GEF-financed investments

	Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
Female	120	120		
Male	240	240		
Total	360	360	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 will achieve these targets through the following key interventions: ? Direct influence includes 500 m buffer around at least 15 aquaculture farms (80 ha/farm) certified under National EAAM Farming Standard under Outputs 2.1-2.3; indirect influence ? total area suitable for aquaculture in Palau coastal waters targeted by sustainable aquaculture policies, legislation, and development plan, and management framework through the Outputs 1.1, 1.2, and 1.3; ? Number of direct project beneficiaries includes: 35-40 community aquaculture farmers that will receive trainings, mentoring and grant support to develop sustainbale aquaculture (Outputs 2.1 and 2.3); 55-65 government officers that will receive training on the National EAAM Standard (Output 2.1), aquaculture management system (Output 1.3), sustainable aquaculture development and monitoring (Output 2.2); and at least 250-280 local community people that will consume production of the sustainable aquaculture farms supported by the project (Outputs 2.1-2.3). The aquaculture sector and marine resource management is a traditional male domain in Palau where current women involvement is no more than 10%. So, one of the project gender mainstreaming targets is to increase women involvement and benefits in the aquaculture sector at least to 30% that is quite ambitious.

Part II. Project Justification

1a. Project Description

The project was designed in full accordance with the PIF with some necessary adjustments to the project Components, Outcomes, Outputs, co-financing, and budget made during stakeholder consultations and project development (see Annex G for details). A brief description of the project is presented below.

1) <u>the global environmental and/or adaptation problems, root causes and barriers that need to be addressed (systems description)</u>:

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The project has been designed to directly address the following key threats for marine biodiversity, ecosystems and local communities in Palau: overharvesting of fish stock, unsustainable aquaculture, and climate change impact.

Key barriers for development of sustainable aquaculture supporting conservation in Palau include: (1) lack of policy, legislation and development plans for integration of the Ecosystem Approach to Aquaculture Management (EAAM); and (2) insufficient knowledge and capacity of government agencies and private sector to implement the Ecosystem Approach to Aquaculture Management (EAAM) (see further detail in Section II: *Background and Situation Analysis (Baseline Course of Action)* of the project document).

2) <u>the baseline scenario and any associated baseline initiatives</u>:

Palau became a signatory to the UN Convention on Biodiversity in 1998 and its national congress ratified the treaty on January 6th, 1999. In 2004 Palau drafted its first NBSAP and last NBSAP was designed for 2015-2025. One of the NBSAP objectives is *?Objective 5.2: Establish guidelines and standards to ensure sustainable aquaculture, agriculture and forestry development and management?*.

Palau became a signatory to the *Convention on International Trade of Endangered Species of Wild Flora and Fauna (CITES)* in 2004. The aim of the convention is to ensure that international trade in wild animal and plant specimens does not threaten species survival. As one of Palau?s obligations to the Convention, a permit is required for export of any species, whole or in part and dead or alive, listed in the CITES Appendix I or II. The majority of CITES permits issued in Palau are for the export of giant clams, with a smaller number of permits issued for hard corals and nautilus (*Nautilus belauensis*). In 2017, 177 CITES permits were approved and issued for species listed in the CITES Appendix III. CITES permits are processed at the BMR.

Palau is a signatory of the UN Framework Convention on Climate Change (UNFCCC). In 2015 the country produced *Palau Climate Change Policy* with the main objective to build the resilience of Palau to climate change and disasters. The policy considers aquaculture as one of the ways to increase the country food security in conditions of climate change.

Since 1999 Palau is a member of FAO and implements *FAO Code of Conduct for Responsible Fisheries.* Article 9 of the Code encourages FAO Member States to develop responsible aquaculture, including relevant policies, development plans, environmental impact assessments and mitigation, sustainable production management, and support of rural communities.

In collaboration with different partners and donors Palau produced the *National Aquaculture Strategy (FAO 2009)*, *National Policy for Strengthening Food Security in Palau as a Priority Climate Change Adaptation Measure (2015), Aquaculture and Fisheries Action Plan (2008)* that have objectives and targets for sustainable aquaculture development in the country. However, none of these documents was officially endorsed by the Palau Government.

There is a limited legislation base for aquaculture development in Palau. For example, the *Palau?s Fisheries and Marine Resources Act (1998)* does not mention aquaculture at all. The *Marine Protection Act (1994)* mentions development and promotion of sustainable aquaculture activities[1][1]. Environmental Quality Protection Act (Title 24 PNCA) and the Marine and Fresh Water Quality Regulations provide framework for the permitting process for aquaculture farm applications.

In October 2015, the Palau National Marine Sanctuary Act (PNMSA) was passed by Congress to preserve 80% of Palau?s Exclusive Economic Zone as the Palau National Marine Sanctuary. This is designated as a no-take area, with the remaining 20% being established as a Domestic Fishing Zone (beginning at the boundary of the territorial sea and extending outward into Palau?s EEZ for an area of approximately 85,896 square kilometers) where only locally-based vessels may operate and from which exports are banned, with the exception of tuna caught in free-schooling purse seine operations. These reforms are being implemented over a period of time that started in January 2016 and will end on December 31, 2019. The PNMS Transition Regulations were adopted and promulgated to govern fishing during this wind-down period so that by January 1, 2020, the Palau National Marine Sanctuary was fully implemented. Establishment of PNMS further increases the role of sustainable aquaculture in Palau?s food security in conditions of decreased wild fish availability. Fish populations in Palau are gradually beginning to recover from decades of overfishing, according to a study released by the Palau International Coral Reef Center (PICRC) in 2021[2][2].

Palau has had a history of aquaculture operations that started during the Japanese colonial period before World War II, but these largely faltered after the Japanese left the islands[3][3]. The Micronesian Mariculture Demonstration Center was founded in the 1970s by the Pacific Fisheries Development Foundation (U.S. National Oceanic and Atmospheric Administration), the U.S. Department of Interior, the United Nations Food and Agriculture Organization, and other international agencies made strides in the successful culture of all seven Palau species of *Tridacnidae* giant clam[4][4]. In recent years, aquaculture has been identified as a priority for the national government of Palau, indicated by its inclusion as a priority in the Palau Climate Change Policy 2016 as a developmental sector to improve

food security, and in the Palau Trade and Investment Policy Framework 2017 as an opportunity to supplement marine resources and generate sustainable livelihoods for Palauans[5][5].

Within the past several years, renewed efforts by government and non-government organizations and agencies have sought to expand the aquaculture sector in Palau. BOF in recent years has focused on expanding the production of the most established aquaculture species in Palau - giant clam production - with the support of a grant from the Government of Japan to renovate the existing hatchery. Further, a low-interest loan program administered by the National Development Bank (NDBP) of Palau was established and is available to prospective aquaculture farmers. Recently, BOF has also focused on finfish production at the Palau National Aquaculture Center (PNAC) and has supported local aquaculture of rabbitfish (*Siganus lineatus* and *S. fuscescens*) with the support from the Government of Taiwan. Palau Community College (PCC) has also been producing fingerlings and conducting aquaculture research focused on identifying potential species of interest and associated best hatchery and production methods[6][6].

Palau negotiated and received a US$ 5,000,000 loan from Taiwan in 2016 as a financial instrument intended to stimulate the development of the agriculture and aquaculture sectors for Palau[7][7]. Administered by the National Development Bank of Palau (NDBP), the funds serve as a lending program available to farmers with a current interest rate of 4.5%. Eligibility for borrowing includes individuals, businesses, state government, and NGOs. Utilization of the loan program for aquaculture has been limited, with 26% of the total sum of loans (~$450,000) closed between 2016 and 2018 related to aquaculture operations. A high collateral requirement, lack of clear permitting process, and environmental requirements were noted as a constraint of use of the loan program[8][8].

Giant clams have been the primary aquaculture species produced in Palau with full hatchery services and seedlings in distribution since the Micronesian Mariculture Center was opened in the early 1970s[9][9]. However, the level of clam supply has not historically been able to fully meet export demand for the aquarium trade. The Mariculture Demonstration Center Facility was expanded in November 2018 with a grant from the Government of Japan. The Bureau of Marine Resources anticipated a drastic increase in capacity to supply giant clam seedlings from the former 200,000 per year to up to 1,000,000 seedlings available for distribution to farmers on an annual basis. There are currently around 60 giant clam farmers in Palau farming at 54 sites, with a total of ~80,000 clams in production. Giant clam seeds had historically been given to farmers at no cost for several decades, however, a change in policy in June 2014 resulted in farmers paying for seeds produced at the hatchery, which contributes to the Giant Clam Seed Sustainability Project Fund[10][10].

Finfish aquaculture is of increasing interest, with the Palau Community College (PCC) supplying 10,000 fingerlings annually since 2007 and the PNAC established in 2010 with the support and continued technical assistance from the Government of Taiwan to conduct research into their production. Focal

species include grouper (*Epinephelus fuscoguttatus*), rabbitfish (*Siganus lineatus, S. fuscescens*), clownfish (*Amphiprion ephippium*), and tiger prawn (*Penaeus monodon*). Rabbitfish aquaculture has been identified as the most locally appropriate and economically viable target species and is a fairly new undertaking that the BOF began supporting in 2015. Since 2015, hatchery production of rabbitfish fry has increased from 1,300 to 4,000 in 2016 to 28,000 in 2017. At this time, the types of species actively farmed for aquaculture for both domestic and international markets are limited to five species of clams, rabbitfish, and milkfish. A multi-stakeholder workshop conducted in 2017 identified the following 5 species as the highest priority candidates for food security and livelihoods in Palau: sea cucumber, milkfish, giant clam, rabbitfish, mangrove crab, and red snapper (*L. gibbus*)[11][11].

The single main aquaculture species produced and exported by Palau commercially and with the widest international reach are giant clam species[12][12]. The main market for giant clams is the aquarium sector. Rabbitfish were also exported commercially, primarily to Guam, however, it is likely more are supplied from wild harvest than from aquaculture. Milkfish and rabbitfish are currently the two main farmed fish for supply in the domestic market, with milkfish dominating the market (14 tones in 2017, FAO 2018). Milkfish farming is more mature, one commercial operation has been providing a consistent supply of fish for over 10 years. Fish purchased at the farm site by locals receive a USD 0.25 discount and are not taxed. Rabbitfish sales have recently begun and the intermittent availability of fish suggests farms are still being trialed and a consistent supply and schedule of sales have not been established. The most recent estimates of total aquaculture production for Palau in 2014 estimate: 22 tones of milkfish worth US$ 200,000 at the farm gate, and 16,000 giant clams worth US$ 85,000[13][13].

Giant clams do not require external feed inputs - instead of consuming naturally available plankton within the water column - thus making the cultivation of these species a highly favorable candidate for Palau?s aquaculture sector. Other aquaculture candidate species farmed in Palau, such as milkfish and rabbitfish, require external inputs of feed. At this time, there are no fish feeds manufactured domestically and they are mainly imported from Taiwan and the Philippines for purchase by farmers. Feed from Taiwan can be purchased at the BOF for a subsidized price of $0.80 per kg, while a small feed store imports alternative feed from the Philippines. At this time, there is no local processing capability for the production of fish feed[14][14].

BOF under the Ministry of Agriculture, Fisheries, and the Environment is responsible for exploring, surveying, developing, managing, and conserving all nearshore marine resources. In addition to operating hatcheries, other services provided by BOF include marine surveys for interested farmers, farm monitoring, supply of seedlings, assistance with the initial permitting process for aquaculture farming in Palau, and administering the CITES permit for export. In addition, through a partnership with the Taiwan Embassy, Palau established the Palau National Aquaculture Center (PNAC) where the Government of Taiwan is providing aquaculture experts to work with BOF on hatchery production and training of fish farmers. Palau Community College Cooperative Research & Extension is a Land Grant System housed at the Palau Community College as a full department to implement an Agriculture Experiment Station,

Cooperative Extension Service, and Residential Instruction of the Micronesia Land Grant Programs in Palau. The department operates a Multi-Species Hatchery and a Research and Development Station bolstering Palau?s capacity in aquaculture. The Multi-Species Hatchery - since its establishment in 2010, has continued to augment seed stock supply for rabbitfish, grouper, milkfish, and mangrove crabs for prospective fish farmers. The hatchery is also utilized as a demonstration and training facility for those in the community who are interested to learn and developing their skills in the seed production of marine organisms. The hatchery facility operates an integrated broodstock, nursery, natural food, and larval production. It also houses a laboratory for researchers and extension agents. A phycology lab is provided for microalgae used as natural food for fish larvae grown and maintained. A few bigger private aquaculture enterprises such as BIOTA and Ngerdubch Corporation each have extended capacity to provide technical support to upcoming farmers or smaller operations and are willing to help. The Palau Aquaculture Cooperative Association (PACA) also assists its members both technical and administrative assistance.

Currently, Palau has 87 aquaculture farms (77 clam farms and 11 fish farms) that are mainly small community and family farms[15][15]. Despite the number of aquaculture farms is growing, 50% of these farms are inactive now. Some of the key challenges faced by giant clam farmers includes poaching, lack of farm maintenance leading to increased mortality, limited market access for cultured adult giant clams due to high price, and lack of consistent giant clam seedling supply. Examining the current pricing for cultured clams, it is believed that there is very little demand from local residents as wild harvest is much more cost effective. Wild populations of giant clams globally continue to decline due to demand from local and export markets, these species.

In 2017, The Nature Conservancy (TNC) established a partnership with BMR, PNAC and Palau Community College ? Cooperative Research & Extension (PCC-CRE) ? to explore opportunities for enhancing rabbitfish farming in Palau. One of the main challenges faced by farmers at the time was acquiring a permit from the Environmental Quality Protection Board (EQPB) to start a farm. TNC explored this challenge and found that the bottleneck for processing of water quality permit was state government identifying an area for the interested farmer to farm. TNC initiated a process to work with the states of Ngiwal, Kayangel, Ngarchelong, Koror, and Aimeliik to identify areas suitable for farming rabbitfish. A partnership between TNC, BMR, and EQPB was established to pilot farming of rabbitfish, whereby EQPB agreed to issue permits for establishment of rabbitfish. There are now nine active rabbitfish farmers with a total of 21 floating rabbitfish cages in Koror, Aimeliik, Melekeok, Ngiwal, Peleliu, Ngatpang, and Ngchesar states. Three farms in Kayangel have been discontinued due the high costs of farming in this remote state, and meaning this state is considered not currently financial feasibility for farming of rabbitfish[16][16].

Sustainable aquaculture can provide local communities in Palau with a number of significant benefits, including healthy food, food security, additional income, and clean environment. However, there are still a number of challenges for that, including the following:

? Low capacity of technical expertise and resources to grow the sector including the breeding, rearing, harvesting, and marketing of prime aquaculture products such as clam and milkfish;

? Informal nature of the sector, such that administrative processes, data collection and information management, and access to farm space are not systematic or standardized, therefore information is not readily available to the public;

? Palau?s environmental regulations is a challenge to aquaculture management, particularly around permitting and identification of suitable sites for aquaculture operations;

? A lack of formal regulations specific to aquaculture policy and management.

? Economics of logistics associated with the remote island location of Palau hampers the profitability of aquaculture operations due to the high costs of importing feed and exporting production. Low local prices of wild-caught seafood also limit the profitability of aquaculture production*[17]*[17].

Key baseline initiatives on aquaculture development (including sustainable aquaculture) in Palau
There is a a few ongoing and recently completed projects and programs in Palau that form a baseline for this GEF project. These programs and projects address issues similar to the GEF project, namely development of small scale aquaculture based on local communities, including ustainable aquaculture approaches. However, there are remaining thematic gaps that can be effectively covered by this GEF project in collaboration and coordination with ongoing initiatives (see Table below).

Baseline initiatives targeting development of aquaculture in Palau, remaining gaps that will be covered by the GEF 7 project, and key project partnerships and linkages with other projects

Name of programme/project, years of implementation	Programme/project objectives and targets	Thematic/Geographic Gaps that will be covered by the GEF7 Sustainable Aquaculture Project	How the UNEP/GEF project will collaborate with the program/project
GEF Financed Projects			

Name of programme/project, years of implementation	Programme/project objectives and targets	Thematic/Geographic Gaps that will be covered by the GEF7 Sustainable Aquaculture Project	How the UNEP/GEF project will collaborate with the program/project
UNDP/GEF Project ?Integrating biodiversity safeguards and conservation into development?, 2018-2023, US$ 4,233,562	Project Objective: To mainstream biodiversity conservation into integrated land and seascape governance, planning and management in Palau. The project is designed to achieve the following results: ? Outcome 1. Enhanced national institutional framework for integrated planning and management of land and seascapes; ? Outcome2. Integrated multi-sector land and seascape ?Ridge-to-Reef? planning and management operational in Babeldaob states to reduce threats to biodiversity and improve ecosystem services to benefit communities and state economies. ? Outcome 3. Integrated multi sectoral planning and management operational in 264,686 hectares of seascapes and coastal areas in the Southern Lagoon to reduce threats to biodiversity and improve ecosystem services to benefit communities and state economies.	The UNDP/GEF Project mainly focuses on fisheries, agriculture, forestry, and tourism policy and management frameworks with limited attention to aquaculture; The UNDP/GEF Project does not target capacity building for sustainable aquaculture in Palau and development of pilot sustainable aquaculture models	? There are opportunities to collaborate in the development of a national sustainable aquaculture policy such as in the participatory seascape/landscape management planning where communities will be able to identify areas to designate for aquaculture activities, including mapping and siting of farms; ? Incorporation of lessons learned by the UNDP/GEF Project into UNEP/GEF Project on sustainable aquaculture ? GEF 7 project will build upon spatial planning (land use plans and nearshore marine spatial plans) provided by the GEF 6 project to prioritize and develop sites for aquaculture. ? This project can also collaborate with GEF6s Gender and Socially Inclusive

Name of programme/project, years of implementation	Programme/project objectives and targets	Thematic/Geographic Gaps that will be covered by the GEF7 Sustainable Aquaculture Project	How the UNEP/GEF project will collaborate with the program/project
	? Outcome 4. Knowledge management, monitoring and evaluation support, equitable gender benefits and biodiversity conservation in Palau. Specifically, the project works to improve existing laws and regulations on fisheries, aquaculture, agriculture, forestry, and tourism to mainstream biodiversity conservation (including IAS and biosecurity); develop guidelines and best practices for use of native species for landscaping, aquaculture, agriculture and forestry; finalize and endorse state ILSMPs that integrate aquaculture and other sustainable NRM approaches; and improve surveillance and enforcement for tourism, fisheries and aquaculture sectors.		Mainstreaming by ensuring project activities are gender and socially inclusive with targeted meetings, prioritizing information collection using an inclusive perspective, facilitating diversity of input from the aquaculture sector, and collecting gender disaggregated data.
Programs and Projects funded by Palau Government and Governments of other countries			

Name of programme/project, years of implementation	Programme/project objectives and targets	Thematic/Geographic Gaps that will be covered by the GEF7 Sustainable Aquaculture Project	How the UNEP/GEF project will collaborate with the program/project
Ngatpang milkfish aquaculture project with JICA & Taiwan Governments support, 2022-2024	Memorandum of Understanding between MAFE and Ngatpang State Government to rehabilitate milkfish ponds and support aquaculture development in Ngatpang.	The Ngatpang project does not focus on sustainable aquaculture	? Cooperation between UNEP/GEF and Ngatpang project to ensure sustainable development of aquaculture in Ngatpang and achieve synergies in the project activities.
Projects of International and Non-Government Organizations			

Name of programme/project, years of implementation	Programme/project objectives and targets	Thematic/Geographic Gaps that will be covered by the GEF7 Sustainable Aquaculture Project	How the UNEP/GEF project will collaborate with the program/project
The Nature Conservancy / NASA Project ?Earth Observations for Climate-Ready Aquaculture Management and Siting to Improve Food Security and Ocean Health in Palau, a Small Island Developing State?, 2018-2022, US$578,000	The project expected results are the following: ? Creation of an aquaculture spatial planning and management guidance manual for use by stakeholders (SDG 14.a, 14.2, & 14.7). The Guidance Manual is intended to support the Government of Palau in developing a sustainable marine aquaculture sector of an appropriate scale. ? Trainings in aquaculture spatial siting capacities for Palau stakeholders (SDG 14.1 & 14.2). The project team developed a multi-month online spatial siting and aquaculture training course through ArcGIS for Palau stakeholders and students. The goal of the training is to eliminate the need for outside assistance with aquaculture spatial siting in Palau once the project period finishes. ? Creation of aquaculture spatial planning and modelling tool (SDG 14.1, 14.2, & 14.7). The prototype online mapping tool proposes aquaculture sites as well as aquaculture areas based	The TNC project does not target development of sustainable aquaculture policy and legislation in Palau; also it does not include capacity building program for government agencies and farmers on sustainable aquaculture approach.	? Consultations and joint planning to achieve synergies and complementarities between the projects, and avoid duplications and double-funding of the same activities; ? Direct collaboration with other projects to achieve expected Outcomes of the GEF project; ? Lessons learning and sharing between the projects to develop effective conservation strategies; ? Participation of TNC project in the monitoring and evaluation of the GEF project.

Name of programme/project, years of implementation	Programme/project objectives and targets	Thematic/Geographic Gaps that will be covered by the GEF7 Sustainable Aquaculture Project	How the UNEP/GEF project will collaborate with the program/project
	on the project team?s analysis. ? Development of recommendations for national sustainable aquaculture policy, and capacity building on sustainable aquaculture		
The Nature Conservancy / Private Donor Project ?Supporting Aquaculture Development in Palau?, 2018-2021, US$ 250,000	Work with private and government to provide support for fish farming in Palau. The project included (1) distribute rabbitfish fries, (2) distribute rabbitfish cage materials, and (3) construct cages.	The TNC project does not target development of sustainable aquaculture policy and legislation in Palau; also it does not include capacity building program for government agencies and farmers on sustainable aquaculture approach.	? Lessons learning and sharing between the projects to develop effective conservation strategies;
The Nature Conservancy / Future of Fish Feed (F3) Project ?Evaluation of an Open Formula Experimental Feed for Rabbitfish (Siganus lineatus) in Palau?, 2019, US$ 75,000	To compare the performance of new feeds for commercial rabbitfish production that do not contain any fishmeal against two reference diets - commercially available milkfish and a Rabbitfish feed from the Philippines. A first trial was run to test out novel protein ingredients, and a second trial was run to decrease the cost of experimental diets without compromising growth performance.	The TNC project does not target development of sustainable aquaculture policy and legislation in Palau; also it does not include capacity building program for government agencies and farmers on sustainable aquaculture approach.	? Lessons learning and sharing between the projects to develop effective conservation strategies;

3) the proposed alternative scenario with a description of outcomes and components of the project:

The **Project Objective** is *to strengthen aquaculture policy, planning, management, and production to protect and enhance marine biodiversity in Palau through an ecosystem approach*. The Objective will be achieved through implementation of three project strategies (components):

- ***Component 1:*** *Enabling a supporting policy environment for development of Sustainable Aquaculture in Palau;*
- ***Component 2:*** *Developing national capacity for Ecosystem Approach to Aquaculture Management (EAAM);*
- ***Component 3:*** *Knowledge management, gender mainstreaming, and monitoring and evaluation.*

All three Components are designed as interconnected strategies to target key threats for marine biodiversity and ecosystems as well as well-being of local communities through sustainable aquaculture development. The suggested strategies have significant flexibility to deliver the project Outputs effectively including under conditions related to the potential COVID-19 pandemic.

The project is designed to achieve the following **Outcomes** during the project lifetime, that will lead to achievement of the project Mid-Term and Long-Term Impacts after completion of the project[18][18]:

Outcome 1: Strengthened legal and institutional frameworks for Sustainable Aquaculture

- Total number of policies/strategies/laws for Sustainable Aquaculture developed by the project and endorsed/implemented by the Government of Palau: baseline ? 0; >= 4 by the end of the project[19][19];

- Presence of the National Sustainable Aquaculture Development Plan endorsed by the Government of Palau: baseline ? 0; 1 by the end of the project;

- Presence of the national aquaculture site selection, permitting, and environmental monitoring framework based on EAAM and endorsed by the Government of Palau: baseline ? 0; 1 by the end of the project

Outcome 2: Strengthened national capacity for Sustainable Aquaculture that contributes to conservation of marine biodiversity

- Total number of aquaculture farms (and farmers) practicing National EAAM Farming Standard: baseline ? 0; by the end of the project ? at least 15 farms/20 farmers (20% are women);

- Total number of government officers (BoF, BoE, EQPB, PALARIS) that have sufficient skills on the aquaculture site selection, permitting, and environmental monitoring in accordance with the National EAAM Farming Standard: baseline ? 0; by the end of the project ? 50 (30% are women);

- Area of marine habitat under improved management through sustainable aquaculture (excluding protected areas) (GEF Core Indicator 5): baseline ? 0 ha; by the end of the project: directly ? >=1,200 ha; indirectly ? 25,500 ha[20][20]

Outcome 3: Lessons learned by the project are applied nationally and internationally for promotion of Sustainable Aquaculture

- Total number of best practices and lessons learned by the project that are applied by other projects in Palau and abroad: baseline ? 0; by the end of the project >= 4;

- **Total number of direct project beneficiaries (GEF Core Indicator 11):** baseline ? 0; by the end of the project - >= 360 (at least 30% women)[21][21]

The project Outcomes will be achieved through delivery of specific project Outputs (project?s products and services):

Outcome 1: Strengthened legal and institutional frameworks for Sustainable Aquaculture

Output 1.1: National policy and legislation updated to integrate Ecosystem Approach to Aquaculture Management (EAAM)

Taking in account the known gaps in the national aquaculture policy and legislation identified by FAO and TNC, the project will conduct further legal analysis to verify the existing gaps and detect new ones that needs to be covered for sustainable aquaculture development in Palau. Based on the analysis results, the project will develop and update the key policy, strategic and legislation documents to integrate EAAM into them (4-5 legal documents total). The list of initially proposed policy and documents for development includes the following[22][22]:

National Sustainable Aquaculture Policy. The National Aquaculture Strategy for Palau was drafted by the FAO in 2009, but it has never been approved by MAFE and implemented. So, the project will update the document into the National Sustainable Aquaculture Policy based on the EAAM; recommendations of FAO, TNC and other projects targeting aquaculture; and experience and needs of the government

agencies (MAFE, BoF, BoE, and EQPB), aquaculture community farms and companies in Palau. So, the new policy will be drafted to guide development of sustainable aquaculture in the country and increase its role in conservation of marine biodiversity (e.g., through restoration of giant clam populations and decreasing pressure on wild fisheries) in the next decade. Palau is in a good position to capitalize on the image of ?clean and green? aquaculture products. The policy will be officially adopted by MAFE for implementation. As soon as the policy is approved, it will serve as the key strategic document for development of sustainable aquaculture based on EAAM.

Aquatic Animal Health Management Strategy. The Strategy was recommended by FAO to ensure safe development of aquaculture in Palau. Palau has not faced any serious aquatic animal disease outbreaks, and appears likely to be free of many major pathogens infecting aquaculture species, but improved management is necessary to minimize the risks of introduction of pathogens, and aquatic animal disease outbreaks. Adoption of better practices is required in the introduction of non-native species, and the production, sale and transport of eggs, larvae or fry, broodstock or other live materials to address the following in the Strategy: (1) establishment of an Introductions and Transfers Committee including representatives of all key agencies with the power to make legally binding decisions; (2) further importations of live aquatic animals should be strongly discouraged until adequate risk analyses have been completed; (3) specific requirements and procedures for the importation of aquatic animals need to be developed along the lines of those established for plants and terrestrial animals and applied on a case by case basis using risk analysis procedures; (4) Appropriate Level of Protection (ALOP) should be stated based on completion of risk analyses; (5) contingency plan for disease outbreaks in aquatic animals should be prepared; etc. The Strategy should be approved by MAFE after development.

National Ecosystem Approach to Aquaculture Management (EAAM) Farming Standard. National EAAM Farming Standard will provide detailed guidance on setting, operating, and monitoring of the sustainable aquaculture farm in Palau. Also, it will provide a set of criteria for government certification of the aquaculture farms as sustainable or green aquaculture enterprises in accordance with the standards of the Aquaculture Stewardship Council (ASC). Certified sustainable aquaculture farms should be provided with a set of tangible benefits, including lower taxation, priority access to national and international investments, easy access to local markets, priority CITEC permits for international export, etc. This Farming Standard and certification will allow to ensure that companies applying EAAM in Palau have real competitive advantage on the domestic and international market. The National EAAM Farming Standard should be discussed with stakeholders and, after finalization, officially endorsed by the Governors Association and approved by MAFE. The Standard will be one of the key steps of implementation of the National Sustainable Aquaculture Policy with a goal to ?capitalize on the image of ?clean and green? aquaculture products? in Palau.

Giant Clam Conservation Act. The Act will limit (or prohibit) harvesting and selling wild giant clams and will prioritize aquaculture as the key way to produce giant clams for domestic and international trade and the way to restore wild stocks of giant cams in Palau coastal waters. This is the national law that clearly identify sustainable aquaculture as an approach for conservation and restoration of wild clam populations in the country. After the Giant Clam Conservation Act drafting and discussion with key stakeholders the draft law will be submitted to the Governors Association and Palau National Congress (Olbiil era Kelulau) for official approval.

All the documents above will be developed under the MAFE leadership with the project technical support in a fully open and participatory process with involvement of all interested stakeholders. To ensure timely policy, legislation, and plan approval by the Palau Government, the project will establish an aquaculture policy working group with involvement of MAFE, BoF, BoA, EQPB, private sector, community and NGO stakeholders. The working group will be involved in the policy drafting from initiation, will lead all discussions on the new or updated policy with stakeholders, and lobby for approval of the developed

policy and legislation by relevant government body. This measure will ensure high involvement of government agencies in the policy and legislation drafting process right from the start and at the same time will provide a pressure on the government agencies from interested private sector representatives and communities to ensure the official policy approval.

Project Partners for Output 1.1: MAFE, Office of the Minister, BoF, BoA, Palau EQPB, PAA, PACA, PCC CRE, Governors Association, PCS, TNC, NDBP, PALARIS

Budget for Output 1.1: US$ 70,000

Output 1.2. National Sustainable Aquaculture Development Plan based on the Ecosystem Approach to Aquaculture Management (EAAM) is produced and endorsed by MAFE

Despite aquaculture has been considered as a national priority in Palau for the last decade, no any national aquaculture development plan have been developed yet. In 2008 under ADB support the country produced the **Aquaculture and Fisheries Action Plan** that provides only general guidance for development of sustainable aquaculture in Palau. The Plan was not endorsed by Palau government and implemented. Thus, there is still a need to develop a comprehensive national aquaculture development plan based on the EAAM principles, sound socio-economic and market analysis, required investments estimates, production and trade targets, and consideration of climate change risks in the Central Pacific. Palau will be unable to compete in mass commodity markets, but should seek to actively explore and promote access to higher value niche markets, and local markets where products from Palau have a competitive advantage due to their green and sustainability image[23][23].

Under this Output the project will develop a National Sustainable Aquaculture Development Plan 2025-2030 based on the best available examples from other countries (e.g., EU National Strategic Plan for Aquaculture Development 2014-2020, National Aquaculture Development Strategy and Action Plan of Bangladesh 2013-2020, etc.). The National Sustainable Aquaculture Development Plan for Palau should address the following key blocks:

? **Legal and Administrative Framework for Sustainable Aquaculture**: national policy and legislation, administrative procedures, key agencies, and spatial planning;

? **Situation Analysis with Aquaculture:** organization within the sector, key producers, key stakeholders, best practices, key lessons, production and financial volumes, number of people employed, analysis of domestic and international markets, impact of climate change, aquaculture impact on biodiversity, available and perspective investments, aquaculture research and education, SWOT analysis and key barriers for aquaculture development, scenarios of sustainable aquaculture development;

? **Vision, Strategic Objectives and Priorities:** key strategies and objectives for sustainable aquaculture development till 2030; expected results and key indicators by states; key actors;

? **Operational Plan till 2030:** key activities to achieve the strategic objectives; milestones; responsible organizations; timelines; required budget; sources of funding and investments; monitoring and evaluation framework. The Operational Plan will also provide a framework for financial sustainability of aquaculture development in Palau, including activities for introduction of climate hazard insurance in the aquaculture sector.

After development and discussions with stakeholders the National Plan should be endorsed by the Governors Association and approved by MAFE, budgeted for implementation, and implemented with annual progress reporting. Similar to the Output 1.1, to ensure timely National Plan approval by the Palau Government, the project will establish an aquaculture planning working group with involvement of MAFE, BoF, BoA, EQPB, PALARIS, private sector, community and NGO stakeholders. The working group will be involved in the national aquaculture planning from the project inception, will lead all discussions on the National Plan with stakeholders, and lobby for approval of the Plan by MAFE and Governors Association. This measure will ensure high involvement of government agencies in the aquaculture planning process right from the start and at the same time will provide a pressure on the government agencies from interested private sector representatives and communities to ensure the official plan?s approval and implementation.

Project Partners for Output 1.2: Office of the Minister, BoF, BoA, Governors Association, PACA, PAA, TNC, PCS, PALARIS, NDBP

Budget for Output 1.2: US 73,000

Output 1.3. MAFE has a comprehensive aquaculture site selection, permitting, and environmental monitoring framework based on GIS database for Ecosystem Approach to Aquaculture Management (EAAM)

MAFE currently has no clear and effective aquaculture site selection, approval, permitting, and environmental monitoring framework. This gap is a challenge to aquaculture management, particularly around permitting and identification of suitable sites for aquaculture operations. This has been repeatedly expressed as a main challenge also by aquaculture farmers[24][24].

To address this significant gap the project will work to provide MAFE and BoF with effective sustainable aquaculture management system based on GIS and EAAM principles. The prototype of such a system was developed by TNC in 2019-2021 ? the Palau Aquaculture Suitability Spatial Planning Guidance https://maps.coastalresilience.org/palau/#/ . Under this complex Output the project will do the following:

? clarify institutional responsibilities of BoF, BoE, and EQPB in the aquaculture site selection, approval, permitting, and environmental monitoring. Thus, responsibility of each agency will be reflected in the updated aquaculture regulations, ToRs and instructions of the agencies;

? develop a GIS database and analytic system based on the updated aquaculture regulations and instructions that will allow effective site selection, approval, permitting, and environmental monitoring process. Ideally the prototype developed by TNC should be used for the system;

? Procure software and computer equipment for the system (the system will be managed by BoF and EQPB);

? Obtain official approval of the system by MAFE and integrate the system into the operational procedures and digital databases of the Ministry, BoF, EQPB, and PALARIS;

? Provide trainings and mentoring on the system to MAFE staff (BoF and EQPB) involved in the national aquaculture management (10-12 officers will be trained).

Fully functional spatial aquaculture site selection, approval, permitting, and environmental monitoring framework based on EAAM will be operated by BoF and EQPB on the daily basis.

Project Partners for Output 1.3: BoF, EQPB, TNC, PALARIS, community aquaculture farms and aquaculture companies

Budget for Output 1.3: US$ 160,000

Outcome 2: Strengthened national capacity for Sustainable Aquaculture that contributes to conservation of marine biodiversity

Output 2.1. National Ecosystem Approach to Aquaculture Management (EAAM) Farming Standard is introduced to controlling government agencies and aquaculture farmers through a training program

Under this Output, the National Ecosystem Approach to Aquaculture Management (EAAM) Farming Standard developed under Output 1.1 will be introduced to local aquaculture farmers and controlling government agencies (BoF, BoE, and EQPB) through a training and mentoring program. It is planned to provide training and mentoring support to 20-25 aquaculture community farms (~30-35 farmers). The mentoring support will include preparation of sustainable aquaculture business plans for the farms and National EAAM Farming Standard certification package. It is expected that at least 15-20 aquaculture community farms in Palau will apply for the certification and start to practice the National EAAM Farming Standard. Certified farms will be monitored by BoF and EQPB semi-annually to ensure that they implement required farming standards. For farms that does not comply with the National EAAM Standard the certification can be suspended or revoked.

Additionally, trainings on the management of the National EAAM Farming Standard will be provided to 50-60 government employees from BoF, BoE, EQPB, and PALARIS involved in the management and monitoring of aquaculture farms in Palau.

Also, under this Output, the project will provide small grants (15-20 grants total) to aquaculture community farms that certify along the National EAAM Farming Standard to support sustainable aquaculture management at the farms (e.g., equipment, fish stock, small construction, aquaculture feed,

etc.). The grant program will be organized by the PMU in cooperation with BoF and local governments. Each small grant project will be monitored quarterly and finalized with technical and financial report.

Project Partners for Output 2.1: BoF, BoE, EQPB, PALARIS, aquaculture community farms, TNC

Budget for Output 2.1: US$ 290,000

Output 2.2. Bureau of Fisheries (BoF) has a lab for development of sustainable aquaculture approaches and environmental monitoring of aquaculture farms

Under this Output the project will support BoF to establish a modern lab for development and testing of sustainable aquaculture protocols and environmental monitoring of aquaculture farms. So, the lab will develop techniques for sustainable farming of giant clams (*Tridacna crocea, Tridacna derasa, Tridacna gigas, Tridacna maxima, Tridacna squamosa, Hippopus hippopus, Hippopus porcellanus*), fish species (*Siganus fuscescens, Siganus lineatus),* and invertebrates (*Penaeus monodon, Holothuria scabra, Actinopyga.sp*). Additionally, the lab will work on development and initial production of the locally made aquaculture feed appropriate for sustainable aquaculture (microalgae and rotifers). All aquaculture species the lab will work with are indigenous for Palau. Sustainable aquaculture protocols and techniques produced by the lab will be distributed among the aquaculture community farms certified along with the requirements of the National EAAM Farming Standard (Output 2.1) as well as other farms that would like to switch to sustainable aquaculture practices.

Additionally, the lab will assist the certified and other community aquaculture farms to organize proper environmental monitoring of the farms impact on marine environment and keep it to required standard.

To build the necessary capacity of the BoF lab, the project will procure the lab equipment for development and testing of sustainable aquaculture protocols and environmental monitoring. Additionally, the project will provide advanced training and mentoring for 5-6 BoF staff on the lab management and use of the equipment. After establishment of the lab, it will be fully supported by BoF in the framework of the agency annual budget.

Project Partners for Output 2.2: BoF, EQPB, PCC-CRE, Palau International Coral Reef Center, Coral Reef Research Foundation.

Budget for Output 2.2: US$ $120,000

Output 2.3. Ecosystem Approach to Aquaculture Management (EAAM) hatcheries are established in Palau

Under this Output, the project will support establishment of two model sustainable aquaculture hatcheries operating in full accordance with the National EAAM Farming Standard for production, demonstration and education purposes. The hatcheries will work in full cooperation with the BoF aquaculture lab (Output 2.1) to put in practice sustainable aquaculture protocols and techniques developed by the lab, including new aquaculture species production. At the same time the new hatcheries will increase production of aquaculture seeds, larvaes, and fingerlings highly needed by Palau aquaculture farmers. Production of the hatcheries will be also used for restoration of wild giant clam populations in Palau waters. The model hatcheries will serve as training centers for farmers that want to develop sustainable

aquaculture and obtain the National EAAM Farming Standard certification. These two model hatcheries are planned to be established at the base of PCC-CRE and a community aquaculture farm located near Koror. The only support required for this Output from the project is equipment for sustainable aquaculture production and environmental monitoring. The protocols for the hatcheries will be developed and introduced by the BoF aquaculture labs in cooperation with the Pacific Community Secretariate (PSC) in line with the National EAAM Farming Standard.

Project Partners for Output 2.3: PCC-CRE, selected community aquaculture farm near Koror, BoF, EQPB, PCS.

Budget for Output 2.3: US$ 205,621

Outcome 3: Lessons learned by the project are applied nationally and internationally for promotion of Sustainable Aquaculture

Output 3.1. Participatory M&E, communication, and gender mainstreaming framework developed and implemented for the project

Participatory project monitoring and evaluation is a key part of the RBM approach practiced by UNEP and GEF for all project and programs. Thus, the project will develop an M&E system and encourage stakeholders at all levels to participate in M&E to provide sufficient information for adaptive management decision-making. For M&E, the project will use standard UNEP approaches and procedures and following groups of indicators:

Output Indicators will be used to measure delivery of the project outputs (the project?s products and services) and monitor routine project progress on monthly and quarterly basis. Collection of information on the output indicators will be performed by the PMU and represented in the project Quarterly and Annual Reports;

Outcome Indicators will be used to indicate the progress toward and achievement of the project outcomes (e.g. capacity or behavioral changes happened in result of use of the project outputs by target groups of stakeholders). Collection of information on the outcome indicators will be performed by the PMU and key partners or might require hiring of consultants. Project progress against outcome indicators will be reflected in the Annual, Mid-Term and Terminal Project Reports, GEF Core Indicator Framework, and Terminal Evaluation Reports. The project will specifically monitor the process of approval and implementation of policy, plans, and frameworks developed under Outcome 1 to make sure they are officially endorsed and applied by the Palau Government. That will contribute to the national policy monitoring framework developed by the UNDP/GEF Project ?Integrating biodiversity safeguards and conservation into development?, 2018-2023.

Gender and Social and Environmental Risk Indicators will be used to assess impact of the project activities on gender equality and involvement of women in sustainable aquaculture development as well as to monitor potential social and environmental risks that may be produced by the project. The ongoing data collection on ESSF risks indicators will be quarterly carried out by the PMU in cooperation with project partners.

Gender Mainstreaming Plan: the GEF project will build on the work of gender-oriented organizations? experience to implement and annually update the Gender Mainstreaming Plan (Appendix 16) to guide the project implementation to: (a) build project partner capacity to mainstream gender and bring along with it globally tested approaches in Women Economic Empowerment strategies that empower women as agents of change; (b) facilitate a multi-stakeholder analysis of the gender issues in all the different components of the program that will inform the gender strategy and action planning with a clear set of measurable gender indicators. The project Gender Mainstreaming Plan will be updated at the project inception to consider the following core components (also indicated in the Appendix 16. Gender Analysis and Mainstreaming Plan): (1) Gender Analysis and Action Planning; (2) Gender Mainstreaming Capacity Building in Implementing Partners, Stakeholder and the Community; (3) Gender Mainstreaming Knowledge and Evidence Generation for Policy Influencing; (4) Operational Monitoring, Evaluation, and Learning. The Plan will be used quarterly to track performance on gender empowerment in the quarterly reports and annual Project Implementation Report (PIR), and to identify adaptive measures if performance is weak. In line with the findings of the PIR, the Gender Mainstreaming Plan will be reviewed and updated annually to ensure that it remains responsive to emerging issues and opportunities. The PIR will include at least one gender mainstreaming ?case study? or story per year. The Gender Mainstreaming Plan will also provide a high-level framework for ensuring that all project planning is fully gender inclusive. The gender data collected by the project will provide valuable information at the local level that can be incorporated into the national gender strategy review process.

Project Partners for Output 3.1: PMU will lead on the Output; all project partners

Budget for Output 3.1: US$ 103,000

Output 3.2. Lessons learned from the project are shared nationally and internationally to promote EAAM

An effective M&E system (Output 3.1) and regular analysis of M&E data will allow the project: (i) to identify the most effective project strategies; (ii) to check project assumptions (hypotheses) and risks; (iii) to prepare management response to changing political, economic, and ecological environment; (iv) to learn from successful and unsuccessful project experience; (v) to incorporate learning in the project planning and adaptive management; and (vi) share experience among GWP, GEF and other projects in Pacific and the world. Lessons learned through the project cycle will be reflected in the Quarterly and Annual Project Reports to ensure that the project uses the most effective strategies to deliver project Outputs and achieve project Outcomes in the changing environment.

To systemize and share its lessons and knowledge, the project will use different communication means including:

? A project Communication and KM Strategy that will be developed at the inception phase and updated annually;

? A project page on the MAFE web-site with available project reports, publications, press-releases, datasets, draft and final legislative documents, developed management plans, etc.;

Annual project information bulletin;

? Special paper publications, including manuals, guidance, methodologies, etc.;

? Collaborative and experience exchange meetings with other similar projects in Pacific;

? Exchange visits for local communities and government agencies to demonstrate the best practices;

? Stakeholders Knowledge Exchange Events hosted by MAFE;

? Publications in mass media, conservation, and scientific journals; and

? Other available communication tools and approaches.

All communication and knowledge management activities will apply a gender sensitive approach with following principles:
- Use male and female knowledge product and public education developers for diversity of perspectives and approaches, as well as male and female reviewers of these products;
- Use gender sensitive language and gender balanced images (women not presented as victims but as agents of change);
- Check context and content (use gender analysis; use convincing gender arguments based on reliable sources and qualitative and quantitative data including sex disaggregated data);
- Refer to international and national gender policy framework, policies, strategies and plans, as applicable and appropriate.

Project Partners for Output 3.2: PMU will lead on the Output; all project partners.

Budget for Output 3.2: US$ 50,000

4) **alignment with GEF focal area and/or impact program strategies:**

The project strategies (components) outlined above are aligned with the following GEF Focal Area:

GEF Focal Area	**Relevant Project Component**

BD-1-1: Mainstream biodiversity across sectors as well as landscapes and seascapes through biodiversity mainstreaming in priority sectors	**Component 1:** Enabling a supporting policy environment for development of Sustainable Aquaculture in Palau. The Component will contribute to BD-1-1 through (1) development of inter-sectoral policy, legislation and planning documents for introduction and implementation of the Ecosystem Approach to Aquaculture Management (EAAM) in the country; and (2) introduction of a comprehensive aquaculture site selection, permitting, and environmental monitoring framework based on EAAM into practice in Palau. **Component 2:** Developing national capacity for Ecosystem Approach to Aquaculture Management (EAAM). The component will contribute to the GEF Focal area through (1) introduction of the National EAAM Farming Standard to aquaculture companies and capacity building on the Standard among local farmers and supervising government agencies; (2) establishment at MAFE a modern lab for sustainable aquaculture development and environmental monitoring of aquaculture farms and providing relevant trainings for MAFE?s staff; and (3) establishment of pilot EAAM hatcheries/farms in Palau for demonstration and education purposes. **Component 3:** Knowledge management, gender mainstreaming, and monitoring and evaluation. This component will ensure that the best practices and lessons learned from Components 1 and 2 will be disseminated nationally and internationally to promote EAAM as an integral way to mainstream sustainable aquaculture in biodiversity conservation and management in Palau and entire Central Pacific. All three project strategies will allow to decrease pressure on wild fisheries, prevent negative impact of traditional aquaculture on marine biodiversity and ecosystems, contribute to Palau?s food security in sustainable way, and at the same time to support restoration efforts for endangered giant clam species in Palau?s coastal waters.

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

The project is built on a relatively strong financial foundation: total co-financing for the project is US$ 8,372,646 with GEF contribution of US$ 1,470,021 , or 14.9% of the total project budget. Details of the project co-financing are described in the sub-section 7.2 of the project document. The project has significant level of investments in sustainable aquaculture policy, planning and management framework under Component 1 (US$ 397,362, or 27% of the GEF budget) to provide strong political foundation for implementation of Component 2. At the same time Components 2 focuses on building essential capacity for development of sustainable aquaculture in Palau, including government agencies and community aquaculture farmers with significant allocation of the GEF budget of $699,621, or 48%. $350,000 of the Component 2 funding will be spent to support sustainable aquaculture practices at ~15-20 small community farms with the level of investment of $17,550/farm in average, including technical and grant support. These sufficient levels of investment will allow to achieve sustainability in community aquaculture farming and livelihood of local communities in Palau. Project investments in equipment for government agencies and two model aquaculture hatcheries ($345,621) will be able to support them operational for at least 5-10 years.

The incremental value of this GEFproject is explained in the table below.

GEF incremental contribution as per component of the project

Baseline Scenario (Business as Usual)	**GEF Incremental Contribution** (what the GEF project will contribute)	**Key Outcomes and GEBs** expected with the Alternative Scenario
Component 1: Enabling a supporting policy environment for development of Sustainable Aquaculture in Palau		
Despite Palau government commitments to develop sustainable aquaculture in the country, there is still insufficient policy, legislation, development plans, and institutional frameworks for effective aquaculture development. Some of the policy documents exist, but they are not officially approved and implemented. Effective aquaculture site selection, approval, permitting, and environmental monitoring framework is still lacking. This gap is a challenge to aquaculture management, particularly around permitting and identification of suitable sites for aquaculture operations. This scenario of the policy/legislation/planning vacuum is likely to continue in Palau for nearest 3-5 years delaying effective aquaculture development in sustainable way	GEF funding will proactively address this gap and support development of missing sustainable aquaculture policy, legislation, planning documents, and institutional frameworks. The project will also work with the Palau Government to make sure that all produced documents/frameworks are officially approved and implemented. All that will allow the country to prioritize measures and produce necessary policy basis for effective development of sustainable aquaculture integrated with conservation.	The expected outcomes/national benefits/GEBs of the project Component 1 are the following: ? Sustainable aquaculture is officially recognized as a national priority and supported with appropriate policy, legislation, and development planning; ? The country has a national sustainable aquaculture standard that allows certification and provides competitive advantages on the market; ? The country has an effective aquaculture site selection, approval, permitting, and environmental monitoring framework based on sustainability principles

Component 2: Developing national capacity for Ecosystem Approach to Aquaculture Management (EAAM)		
Current capacity of Palau for sustainable aquaculture (both ? government agencies and private sector) is relatively low. Aquaculture development efforts in Palau to date have focused primarily on building capacity for aquaculture production and not on building capacity for sound governance and decision support tools for the sector, which has stymied sustainable industry development[25][25]. This situation is not expected to change significantly in the nearest 3-5 years without special ?catalytic? interventions.	GEF project approach will allow to build national capacity for sustainable aquaculture operations in line with a national standard, including aquaculture farmers and controlling government agencies. Additionally the project will support capacity of government agencies (BoF, EQPB) for effective environmental monitoring of aquaculture farming in Palau, including Environmental Assessment (EA) and Environmental Impact Statement (EIS). GEF investments will allow to establish two demonstration sustainable aquaculture hatcheries as learning centers for aquaculture farmers.	The GEF intervention are expected to lead to: ? 30-35 aquaculture farmers are trained, mentored, and supported on the implementation of the National EAAM Farming Standard ? 50-60 government employees trained on implementation of the National EAAM Farming Standard; ? Palau has a modern lab for sustainable aquaculture approaches and environmental monitoring of aquaculture farms with trained 5-6 of staff; ? Palau has two demonstration and training hatcheries for sustainable aquaculture, that also increase aquaculture production potential and contributes to climate change resilience of aquaculture sector
Component 3: Knowledge management, gender mainstreaming, and monitoring and evaluation		
Currently Palau does not have a knowledge management and lessons learning system to promote development of sustainable aquaculture and disseminate best aquaculture practices among farmers. Also, there is no special policy to mainstream gender in the aquaculture sector.	The GEF increment will establish a project M&E, knowledge management, and lessons learning framework to support effective implementation of Components 1 and 2. Additionally, the project will produce and implement gender mainstreaming and communication strategies. Best sustainable aquaculture practices and lessons learned will be disseminated among other projects in Palau and abroad.	The GEF input under this Component is expected to lead to: ? Effective project M&E, KM, and lessons learning system that can be used by the key stakeholder beyond the project lifetime; ? Gender is effectively mainstreamed in all project activities; ? Best sustainable aquaculture practices and lessons learned by the project are available for other projects for replication

6) <u>global environmental benefits (GEF TF) and/or adaptation benefits (LDCF/SCCF)</u>:

The following Global Environmental Benefits will be delivered by the project:
? Increased area of marine habitat under improved management benefiting to conservation: direct impact - **>=1,200 ha**; indirect impact ? **25,500 ha**;
? >= 360 (at least 30% are women) direct project beneficiaries, 80% of those are local people in the project sites;

Long-Term project impacts:
? Decreased pressure on wild fisheries due to increasing food production through aquaculture;
? Healthy marine environment and low negative aquaculture impact on marine habitat due to sustainable aquaculture development;
? Restoration of wild giant clam populations via conservation aquaculture;
? Increased food security and adaptive capacity of local communities through sustainable aquaculture development.

7) <u>innovativeness, sustainability and potential for scaling up</u>:

Innovativeness and potential for scaling up. Innovation for development is about identifying more effective solutions that add value for the people affected by development challenges ? people and their governments, UN services users and clients[26][26]. In accordance with this definition the project suggests a few innovative tools that can be potentially replicated by other projects in Palau and other countries:

? Development and introduction of the National EAAM Farming Standard certification is an innovative tool for Palau to provide competitive advantage to sustainable aquaculture farmers;

? Development of the comprehensive sustainable aquaculture site selection, permitting, and monitoring system based on GIS is quite innovative for Palau.

The development and implementation of these innovative mechanisms as well as other best practices produced by the project can be replicated in Palau and other Pacific countries. To make it possible the project will:

- Conduct quarterly lessons learning session to systemize positive and negative experience from the project implementation and identify best practices for potential replication;
- Develop detailed algorithm for each of the best practice models generated by the project with consideration of factors contributing to the practice success and failure;
- Disseminate best practice models among national and international stakeholders through different communication channels and assist them in their replication providing on demand technical support to interested parties.

Sustainability. The project will ensure the sustainability of the Outcomes through a number of means integrated in the delivery of the project Outputs. We consider them below under different aspects of sustainability, including financial and institutional, environmental, and socio-political.

Financial and institutional sustainability will be achieved by (i) involving key partners and donors with a long-term presence in the country (e.g., TNC, FAO, PCC, PMDC, PNAC, PAA); (ii) ensuring ownership of the project results by the government agencies and community aquaculture farms; (iii) careful financial planning and budget sources analysis integrated in the National Aquaculture Development Plan 2025-2030; (iv) small grant support of community aquaculture farms and considerable project investments in the aquaculture permitting system, and sustainable aquaculture lab, and demonstration hatcheries that should be sufficient for next 5-10 years after the end of the project; (v) collaboration with other sustainable development and conservation projects in the country and leveraging of their resources to support and multiply the GEF project results.

Environmental sustainability will be achieved through the implementation of all project Outputs that aim to provide Palau with a bold framework for development of sustainable aquaculture practices that have minimal impact on marine environment and contribute to biodiversity conservation via decreasing pressure on wild fisheries, providing stock for restoration of wild populations, and increasing national resilience to climate change impacts.

Socio-political sustainability. The social and political sustainability of the project will be achieved mainly through tight alignment of the project with national political and development priorities and the direct participation of the government agencies, private sector, and local communities in planning and implementation of the project activities, as well as through the long-lasting direct and indirect project economic and social benefits (e.g., through economic and health benefits of sustainable aquaculture farming; increased sustainability of business practices incorporating sea turtle and seagrass conservation and potential competitive advantage of such models on the international market).

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[1] Marine Protection Act of 1994 Title 27 Division 2 Chapter 12. (later referenced amendment RPPL 7-43) Restructure of the Bureau of Marine Resources through executive order no. 283 in 2010

[2] Palau's fish stocks slowly rebounding from decades of overfishing (pacificislandtimes.com)

[3] Gibbons-Decherong, L. 2018. Baseline Information Report: The Policy and Activity of Aquaculture in Palau. FAO TCP/SAP/3603.

[4] Heslinga, G. A., Watson, T. C., and Isamu, T. 1988. *Status of the MMDC Giant Clam Hatchery -- Republic of Palau.* South Pacific Commission: Twentieth Regional Technical Meeting on Fisheries

[5] Gibbons-Decherong, L. 2018. Baseline Information Report: The Policy and Activity of Aquaculture in Palau. FAO TCP/SAP/3603.

[6] The Nature Conservancy, Palau Bureau of Fisheries, Palau Community College, & Palau Environmental Quality Protection Board. (2022). Guidance Manual for Marine Aquaculture Spatial Planning and Management in the Republic of Palau (2nd ed.). Koror.
[7] Gibbons-Decherong, L. 2018. Baseline Information Report: The Policy and Activity of Aquaculture in Palau. FAO TCP/SAP/3603.

[8] The Nature Conservancy, Palau Bureau of Fisheries, Palau Community College, & Palau Environmental Quality Protection Board. (2022). Guidance Manual for Marine Aquaculture Spatial Planning and Management in the Republic of Palau (2nd ed.). Koror.

[9] Heslinga, G. A., Watson, T. C., and Isamu, T. 1988. *Status of the MMDC Giant Clam Hatchery -- Republic of Palau.* South Pacific Commission: Twentieth Regional Technical Meeting on Fisheries

[10] The Nature Conservancy, Palau Bureau of Fisheries, Palau Community College, & Palau Environmental Quality Protection Board. (2022). Guidance Manual for Marine Aquaculture Spatial Planning and Management in the Republic of Palau (2nd ed.). Koror.
[11] The Nature Conservancy, Palau Bureau of Fisheries, Palau Community College, & Palau Environmental Quality Protection Board. (2022). Guidance Manual for Marine Aquaculture Spatial Planning and Management in the Republic of Palau (2nd ed.). Koror.

[12] Gibbons-Decherong, L. 2018. Baseline Information Report: The Policy and Activity of Aquaculture in Palau. FAO TCP/SAP/3603.

[13] The Nature Conservancy, Palau Bureau of Fisheries, Palau Community College, & Palau Environmental Quality Protection Board. (2022). Guidance Manual for Marine Aquaculture Spatial Planning and Management in the Republic of Palau (2nd ed.). Koror.

[14] The Nature Conservancy, Palau Bureau of Fisheries, Palau Community College, & Palau Environmental Quality Protection Board. (2022). Guidance Manual for Marine Aquaculture Spatial Planning and Management in the Republic of Palau (2nd ed.). Koror.

[15] Information of the Bureau of Fisheries 2022

[16] The Nature Conservancy, Palau Bureau of Fisheries, Palau Community College, & Palau Environmental Quality Protection Board. (2022). Guidance Manual for Marine Aquaculture Spatial Planning and Management in the Republic of Palau (2nd ed.). Koror.

[17] The Nature Conservancy, Palau Bureau of Fisheries, Palau Community College, & Palau Environmental Quality Protection Board. (2022). Guidance Manual for Marine Aquaculture Spatial Planning and Management in the Republic of Palau (2nd ed.). Koror.

[18] Given the project?s short lifetime (4 years only), the project?s Mid-Term Impacts (reduction of Direct Threats for marine biodiversity) and Long-Term Impacts (improving of wild fisheries and marine ecosystems status and food security for local communities) will not be achieved at the project completion and will require additional time (at least 5 years) to be realized

[19] The estimated list of the documents include the National Sustainable Aquaculture Policy; Aquatic Animal Health Management Strategy; National EAAM Farming Standard; Giant Clam Conservation Law prohibiting wild stock harvesting selling at the local markets and promoting giant clam population restoration activities through aquaculture;

[20] Direct influence includes 500 m buffer around at least 15 aquaculture farms (80 ha/farm) certified under National EAAM Farming Standard (Outputs 2.1-2.3); indirect influence ? total area suitable for aquaculture in Palau coastal waters targeted by sustainable aquaculture policies, legislation, and development plan, and management framework (Outputs 1.1, 1.2, and 1.3)

[21] Direct project beneficiaries include people received project training, mentoring, grant support; and people consuming production of the sustainable aquaculture farms supported by the project

[22] The list of the proposed legal documents is compiled based on the FAO and TNC recommendations. It should be revised after the legal review at the project start and adjusted accordingly in response to the review and potential political and legal changes in the country before the project start

[23] Republic of Palau ? National Aquaculture Strategy. Draft ? 28 July 2009

[24] Gibbons-Decherong, L. 2018. Baseline Information Report: The Policy and Activity of Aquaculture in Palau. FAO TCP/SAP/3603.

[25] The Nature Conservancy, Palau Bureau of Fisheries, Palau Community College, & Palau Environmental Quality Protection Board. (2022). Guidance Manual for Marine Aquaculture Spatial Planning and Management in the Republic of Palau (2nd ed.). Koror.
[26] https://www.undp.org/content/undp/en/home/2030-agenda-for-sustainable-development/partnerships/sdg-finance--private-sector/innovation.html

1b. Project Map and Coordinates

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

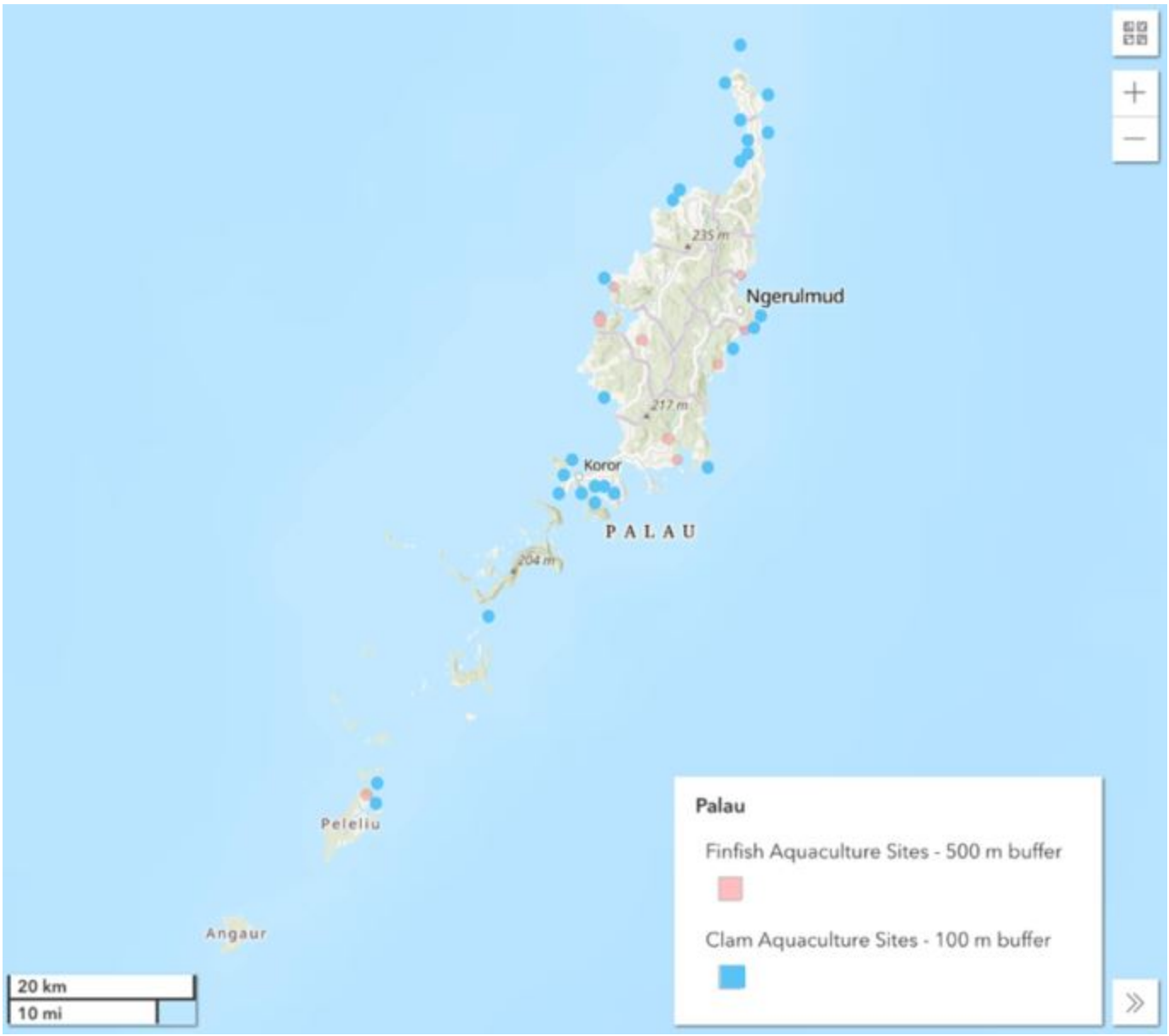

Figure 3. Location of the key community aquaculture farms in Palau the project will work with (source: https://maps.coastalresilience.org/palau/#/)[1]

Approximate coordinates of the project sites? (community aquaculture farms)

Longitude	Latitude
134.49150? E	7.32786? N
134.46229? E	7.34740? N
134.54392? E	7.34478? N
134.49704? E	7.49903? N
134.49698? E	7.52060? N

134.54946? E	7.60301? N
134.62829? E	7.65433? N
134.61102? E	7.72699? N
134.64338? E	7.71015? N
134.62480? E	7.51901? N
134.62346? E	7.47702? N

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

1c. Child Project?

If this is a child project under a program, describe how the components contribute to the overall program impact.

This UNEP-GEF project in Palau is not a child project for any program.

2. Stakeholders

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

Civil Society Organizations Yes

Indigenous Peoples and Local Communities Yes

Private Sector Entities Yes

If none of the above, please explain why: No

Please provide the Stakeholder Engagement Plan or equivalent assessment.

This project was developed using a transparent, open, and fully participatory approach with the involvement of all groups of relevant stakeholders (government organizations, NGOs, local communities, and the private sector) at national level. More than 10 individual and focus group consultations (including remote on-line meetings) were conducted in Koror, and at local level. E-mail communication and Skype calls took a significant part of the consultative process with national and international stakeholders. The key objectives of consultative process were the following:

? Inform all group of stakeholders on the project preparation and allow them to participate in the project development and share their concerns about the project proposed implementation;

? Evaluate current level of aquaculture in Palau and identify obvious barriers on the way of sustainable aquaculture development;

? Collect information on baseline programmes and projects related to the project objective;

? Understand local, cultural and political context in the country;

? Assess current capacity of government agencies, private sector and local communities to develop aquaculture sustainably;

? Develop relevant project Outputs based on key national needs on sustainable aquaculture development and make sure they are complementary to other ongoing and planned projects;

? Conduct Safeguard Risk Identification and rate key social and environmental risks the project may produce directly or indirectly;

? Identify key risks for the project implementation and sustainability of the key results, and develop appropriate risk management measures;

? Clearly define the project area for interventions and collect information on Outcome and Impact Indicators; and

? Identify potential project partners and clarify stakeholder roles in the project implementation.

Total of 57 stakeholders were consulted (46% females and 54% males). Based on our observations during the stakeholder engagement exercise, we noted the need to deliberately focus on women as key stakeholders in order to amplify their voices, especially in the project area (see section 3.11 Environmental and social safeguards of the ProDoc and Appendix 16. Gender Analysis and Mainstreaming Plan). Additionally, stakeholder consultations demonstrated high level of support to the project among the government agencies, private sector, and local communities as well as their willingness to participate in the project activities. As a result of the Stakeholder Analysis, the following groups of project stakeholders were identified for the project implementation (see Table 1):

Table 1. Key project stakeholders and their roles in the project implementation

Stakeholder	**Mandate/Current projects**	**Potential role in the GEF Project**
Government Agencies		

Ministry of Agriculture Fisheries, and Environment (MAFE)	The Ministry is responsible for leading the development of a national aquaculture policy including resourcing and supporting aquaculture at a sectoral development level. The Ministry oversee the Bureau of Agriculture, Bureau of Fisheries, and the Bureau of Environment. The development of sustainable aquaculture is mandated under the Bureau of Fisheries.	? Project Implementation; ? Project Co-financing; ? Charing of the Project Steering Committee; ? Coordination between other GEF and non-GEF projects on sustainable aquaculture development; ? Key partner to deliver Outputs 1.1 and 1.2

Bureau of Fisheries (BoF)	The Bureau of Fisheries is the lead implementor of marine resources regulations under Palau?s Marine Protection Act including oversight of Division of Aquaculture which houses the Palau Mariculture Development Center, and administers permit applications for export of aquaculture products. Responsible for exploring, surveying, developing, managing and conserving all near-shore marine resources. Under this mandate the Bureau has five distinctive key areas of administration: 1. Policy includes institutional and regulatory framework for management of marine resources; 2. Management research and conservation of marine resources through national management and co-management with states; 3. Development and promotion of sustainable aquaculture activities; 4. Development of nearshore fisheries resources; and 5. Collection and analyses of all forms of marine resources.	? Participation in the project development; ? Member of the Project Steering Committee; ? Project Co-financing ? Project Partner for Outcomes 1-3; ? Participation in the project M&E
Bureau of Agriculture (BoA)	The Bureau of Agriculture is responsible for the promotion, development, protection and conservation of Palau?s land based natural resources; it is also mandated to assist families to have the skills, resources, and opportunities to ensure sustained food production, nutrition, food security and wise stewardship of ecosystems. The Bureau is composed of the Division of Horticulture and the Division of Livestock. The Bureau of Agriculture produces locally milled feed for aquaculture species.	? Participation in the project development; ? Member of the Project Steering Committee; ? Participation in the project M&E

Bureau of Environment (BoE)	The Bureau of Environment is responsible for the protection of Palau?s natural environment, conservation of resources, promotion of sustainable development through regulatory oversight and enforcement. The Bureau houses the Division of Protected Areas and Species and the Division of Forest, Land, Water Management. BoE is critical for collaboration and partnership with aquaculture sector to promote sustainable aquaculture, as well as agree on viable indicators of sustainable practices.	? Participation in the project development; ? Member of the Project Steering Committee; ? Project Partner for Outputs 1.1-1.3, 2.1-2.2; ? Participation in the project M&E
Palau Environmental Quality Protection Board (EQPB)	The Palau EQPB is mandated under Palau?s Environmental Quality Protection Act. The agency is responsible for implementation and public compliance of several regulations under the act: 1. Earthmoving 2. Marine and Fresh Water Quality 3. Toilet and Waste Water Disposal Facilities 4. Solid Waste Management 5. Pesticides 6. Public Water Supply Systems 7. Environmental Impact Statements 8. Air Pollution Control; and 9. Ozone Depleting Substances The agency administers the Point Source Pollutant Discharge Permit Application for aquatic animals which extends to aquaculture activities	? Participation in the project development; ? Member of the Project Steering Committee; ? Project Partner for Outputs 1.1-1.3, 2.1-2.2; ? Participation in the project M&E

Governors Association	The Governors Association is a platform for all of the governors to meet and discuss national initiatives and projects that affect states. The state governments exercise ownership jurisdiction beginning from the hightide watermark and extending 12 nautical miles over the reef. The majority of aquaculture activities are within immediate reef areas of state governments. The states grant water-use leases for aquaculture activities.	? Participation in the project development; ? Member of the Project Steering Committee; ? Project Partner for Outputs 1.1-1.3, 2.1-2.2; ? Participation in the project M&E
Division of Aquaculture	The Division of Aquaculture is responsible for the following areas: ? Maintain and operate national aquaculture facilities ? Conduct aquaculture research and development ? Produce seedlings and fingerlings for priority finfish and invertebrate species ? Facilitate the development of sustainable and economically viable aquaculture fishery ? Provide technical and extension services to aquaculture farmers ? Develop database of aquaculture farmers	? Participation in the project development; ? Member of the Project Steering Committee; ? Project Partner for Outcomes 1-3; ? Participation in the project M&E
Palau Community College Cooperative Research Extension Program (PCC-CRE)	The PCC-CRE operates a multi-species hatchery program to augment seed stock supply for prospective fish farmers. The hatchery is also utilized as a demonstration and training facility for those in the community who are interested to learn and develop their skills in the seed production of marine organisms. The hatchery operates an integrated broodstock, nursery, natural food and larval production. It also houses a lab facility for researchers and extension agents. A phycology lab is provided for microalgae used as natural food for fish larvae are grown and maintained.	? Participation in the project development; ? Project Partner for Outputs 2.1-2.3; ? Participation in the project M&E

Palau Mariculture Demonstration Center (PMDC)	Giant Clam hatchery operations in the Division of Aquaculture under the Bureau of Fisheries MAFE	? Participation in the project development; ? Project partner for Outcome 2; ? Participation in the project M&E
Palau National Aquaculture Center (PNAC)	Finfish hatchery operations in the Division of Aquaculture under the Bureau of Fisheries MAFE	? Participation in the project development; ? Project partner for Outcome 2; ? Participation in the project M&E
Office of the Palau Automated Land and Resources Information System (PALARIS)	? Spatial planning and mapping of all states, including existing farms and potential or planned aquaculture sites; ? Spatial data management ? Data and evidence for Monitoring and Evaluation Analysis for siting and water classification	? Participation in the project development; ? Project partner for Outcomes 1 and 2; ? Participation in the project M&E;
Palau Coastal Fisheries and Aquaculture Advisory Committee	Inactive. The committee has not been created yet, but is pursuant to Palau public law 11-7, intended to create a body to provide oversight of income coming in from the Project Development Fund. This income is Palau?s share in the US Treaty under the Palau Arrangement for the Management of the Western Pacific Purse Seine Fishery.	? Perspective stakeholder and partner if established before or during the project implementation
National Development Bank (NDBP) of Palau	Leads aquaculture development lending program for local farmers	? Coordination of the project and the bank activities under the Outcome 2
Inter-Governmental Bodies, International Organizations, and Foreign Government Assistance Programs		
Micronesian Association for Sustainable Aquaculture (MASA)	Inactive. Regional organization between Palau and other Micronesian countries for aquaculture but inactive at this time due to interruption of the COVID19 pandemic.	? Perspective stakeholder and partner if activated before or during the project implementation

Food and Agriculture Organization (FAO)	Support development of sustainable aquaculture in Palau. Implements the project ?Mainstreaming climate-resilience food production for food and nutritional security? 2022 ? 2023, USD200,000.	? Participation in the project development; ? Participation in the project M&E; ? Coordination of activities to avoid duplications, achieve synergies, and exchange lessons and best practices
Taiwan Technical Mission	Support of aquaculture development in Palau, including funding of PMDC	? Coordination of activities to avoid duplications, achieve synergies, and exchange lessons and best practices
USDA Center for Tropical and Subtropical Aquaculture	The Center for Tropical and Subtropical Aquaculture (CTSA) is one of five regional aquaculture centers in the United States established by the U.S. Department of Agriculture. The regional aquaculture centers integrate individual and institutional expertise and resources in support of commercial aquaculture development. In Palau it works in partnership with PCC-CRE	? Participation in the project development; ? Project partner for Outcome 2; ? Participation in the project M&E
Secretariat of the Pacific Community	The SPC is a membership international development organization, Palau is one of 22 Pacific island countries member. Palau and SPC are in constant engagement in the areas of climate change, fisheries, food security and other sectoral areas including agriculture and aquaculture. The SPC engages both government and farmers in capacity building development activities, including grant opportunities for agencies and farmers. Some recent work include training to improve national aquatic disease status reporting to the International de Epizooties (OIE), business mentoring and technology transfers.	? Participation in the project development; ? Coordination of activities to avoid duplications, achieve synergies, and exchange lessons and best practices
Non-Government Organizations		

Palau Small Business Development Center (SBDC)	The Palau Small Business Development Center (Palau SBDC) is a member of the University of Guam?s Pacific Islands Small Business Development Center Network (PISBDCN). The SBDC provides counseling in all areas of business management including pre-venture feasibility, business plan development, marketing, record keeping, financial and human resource management, operations management, and access to capital, as well as specialized areas such as international trade and technical services. The Center provides assistance to business planning for existing and new aquaculture farmers	? Participation in the project development; ? Project partner for Outcome 2; ? Participation in the project M&E
Palau Community Action Agency (PCAA)	The PCAA is responsible for community action initiatives for anti-poverty and carry out activities to advance the US Economic Development Act of 1964. PCAA collaborates with MAFE and support agriculture and aquaculture development.	? Informing about the project; ? Potential consultations on the project development; ? Potential partnership to deliver Outputs 2.1-2.3
Palau Conservation Society (PCS)	The Palau Conservation Society is a national NGO with a mission to partner with communities to protect biodiversity, promote sustainability of resources through traditional conservation ethics, and in building community adaptability to climate change PCS collaborates with MAFE conservation issues and support sustainable aquaculture development. Assisting MAFE in the development of a sustainable aquaculture policy framework.	? Participation in the project development; ? Project Partner for Outputs 1.1-1.3; ? Participation in the project M&E
Palau Aquaculture Alliance (PAA)	The alliance is made up of a group of active farmers (12) who recently formed to try and harness their expertise and resources to address the constant shortage of clam seedlings supply from the PMDC. The PAA is an NGO unit of the Palau Aquaculture Cooperative Association (a for profit organization).	? Participation in the project development; ? Potential member of the Project Steering Committee; ? Project Partner for Outcome 1 and 2; ? Participation in the project M&E

Palau Aquaculture Cooperative Association (PACA)	For profit cooperative association of aquaculture operators.	? Participation in the project development; ? Potential member of the Project Steering Committee; ? Project Partner for Outcome 1 and 2; ? Participation in the project M&E
The Nature Conservancy (TNC)	The Nature Conservancy is an international NGO with an active presence in Palau and has significantly contributed scientific and technical expertise to help in the development of sustainable aquaculture in Palau including resources for aquaculture farmers. Key contribution is the Aquaculture Siting and Guidance Manual for Palau; and based on their experience can contribute a wealth of knowledge to the development of a national aquaculture policy.	? Participation in the project development; ? Potential member of the Project Steering Committee; ? Project Partner for Outcome 1 and 2; ? Participation in the project M&E
Ebiil Society	The society?s main goal is the education of environmental protection and proper management of natural resources through indigenous knowledge. Current projects include terrestrial management/reforestation, turtle monitoring, marine debris monitoring and education, sea cucumber aquaculture, and summer camps which teach indigenous knowledge about environment, culture, and tradition.	? Participation in the project M&E and gender mainstreaming activities
Local Communities		
Key Local Communities involved or residing near key aquaculture sites	Ngarchelong Ngatpang Melekeok Airai	? Participation in the project development; ? Project partners for Outcome 1 and 2; ? Project beneficiaries
Private Sector		
Scientela company	Commercial Aquaculture Operator	? Participation in the project development; ? Project Partner for Outcome 1 and 2; ? Participation in the project M&E

Palau Aquaculture company	Commercial Aquaculture Operator	? Participation in the project development; ? Project Partner for Outcome 1 and 2; ? Participation in the project M&E
Watson and Sons Aquaculture Palau	Commercial Aquaculture Operator	? Participation in the project development; ? Project Partner for Outcome 1 and 2; ? Participation in the project M&E
Cyantech Biosolutions Company	Commercial Aquaculture Operator	? Participation in the project development; ? Project Partner for Outcome 1 and 2; ? Participation in the project M&E
Ngerdubch Corporation	Commercial Aquaculture Operator	? Participation in the project development; ? Project Partner for Outcome 1 and 2; ? Participation in the project M&E

In addition, provide a summary on how stakeholders will be consulted in project execution, the means and timing of engagement, how information will be disseminated, and an explanation of any resource requirements throughout the project/program cycle to ensure proper and meaningful stakeholder engagement

Please refer to Appendix 17 and 18.

Select what role civil society will play in the project:

Consulted only;

Member of Advisory Body; Contractor; Yes

Co-financier; Yes

Member of project steering committee or equivalent decision-making body; Yes

Executor or co-executor;

Other (Please explain) Yes

Contracted service providers, or Responsible Parties.

3. Gender Equality and Women's Empowerment

Provide the gender analysis or equivalent socio-economic assesment.

Palau is one of only seven countries in the world not to be a signatory of the Convention on the Elimination of all forms of Discrimination Against Women (CEDAW), however, it has recently passed the Family Protection Act 2013. Customary law has constitutional status in Palau and the application of customary practices influences formal criminal procedures. Palau has no sexual harassment, human trafficking or sex tourism legislation. The definition of rape is limited to sexual intercourse and spousal rape is still exempt from prosecution. The common law rule requiring proof of physical resistance in order to prove absence of sexual consent is still applied, as is the defense of reasonable belief that a victim was of lawful age of consent. Palauan women are able to vote and can participate as candidates in the elections for president, the 16 members of the National Congress, and the 13-member Senate[1].

However, work still needs to be done in Palau to achieve gender equality. As of February 2021, only 6.3% of seats in parliament were held by women. In 2018, 13.8% of women aged 15-49 years reported that they had been subject to physical and/or sexual violence by a current or former intimate partner in the previous 12 months. As of December 2020, only 16.4% of indicators needed to monitor the SDGs from a gender perspective were available, with gaps in key areas, in particular: unpaid care and domestic work, key labor market indicators, such as the gender pay gap and information and communications technology skills. In addition, many areas ? such as gender and poverty, physical and sexual harassment, women?s access to assets (including land), and gender and the environment ? lack comparable methodologies for regular monitoring. Gender inequality is an issue in aquaculture farming in Palau: women working in the sector earn 19% less than men[2], and total share of women in the sector is less than 20%. Closing these gender data gaps is essential for achieving gender-related SDG commitments in Palau.

The PPG gender analysis (Appendix 16) clearly demonstrated that all three gender gaps identified by the GEF Gender Implementation Strategy (2018) are relevant for this particular project:

? Unequal access to and control of marine resources;

? Unbalanced participation and decision making in marine resources planning and governance at all levels;

? Uneven access to socio-economic benefits, markets, and services.

To improve this situation and address the gaps in the context of the GEF project, appropriate gender and social measures have been fully considered in the project design, and gender accountability is a cross-cutting issue that will be tracked as part of the project M&E system (see Table 8 and Appendix 16 for

details). During the project development, the PPG team tried to involve as many women as possible in the consultation process. However, overall women?s participation was a bit lower than men?s (46%) due to traditional male dominance in aquaculture and environmental management issues in Palau.

To ensure gender mainstreaming, the project will implement and annually update the Gender mainstreaming plan (Appendix 16) (Output 3.1). The plan will guide the project implementation to build project partner capacity to mainstream gender and bring along strategies that empower women as agents rather than as victims of marine resources depletion and climate change. This plan will also facilitate a multi-stakeholder analysis of the gender issues with a clear set of measurable gender indicators.

The key guidelines for the plan implementation are outlined below:

•The project will promote gender parity in the Project Steering Committee and in the PMU. Project interventions will seek a greater and more even gender representation with the potential for gender mainstreaming-related activities. Furthermore, relevant gender representation will be pursued in the project implementation. All project staff recruitment shall be specifically undertaken inviting and encouraging women applicants. The TORs for key project staff all incorporate gender mainstreaming related responsibilities.
•The project will adopt the following principles in the day to day management: (i) gender stereotypes will not be perpetuated; (i) women and other vulnerable groups (local communities in the project area) will be actively and demonstrably included in project activities and management whenever possible, and (iii) derogatory language or behaviour will not be tolerated.
•The project will promote gender mainstreaming and capacity building within its project staff to improve understanding of gender issues, and will have an appointed KM, M&E, Gender and Communication Officer who will serve as a focal point for gender issues to support development, implementation, monitoring on gender mainstreaming internally and externally. This will include facilitating gender equality in capacity development and women?s empowerment and participation in the project activities. The project will also work with UNEP experts in gender issues to utilize their expertise in gender mainstreaming. These requirements will be monitored by the UNEP during project implementation.
•The project has gender disaggregated indicators in the PRF for regular monitoring and evaluation of the project progress and reporting, and will facilitate involvement of women in the M&E implementation (see Table 8 and Appendix 16. Gender Analysis and Mainstreaming Plan).

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[1] https://asiapacific.unwomen.org/en/countries/fiji/co/palau

[2] Aquaculture and Seafood Farmer Average Salary in Palau 2022 - The Complete Guide (salaryexplorer.com)

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 Yes

Generating socio-economic benefits or services or women Yes

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

Yes

4. Private sector engagement

Elaborate on the private sector's engagement in the project, if any.

The project is planning extensive private sector involvement in the implementation, mainly small community aquaculture farms and local aquaculture companies. Private sector will be fully involved in the following project Outputs:

•***Output 1.1:*** *National policy and legislation updated to integrate Ecosystem Approach to Aquaculture Management (EAAM)* (represntatives of community aquaculture farms, aquaculture companies and their associationas will participate in discussion and development of the policy and legislation for sustainable aquaculture the project produces);
•***Output 1.2:*** *National Sustainable Aquaculture Development Plan based on the Ecosystem Approach to Aquaculture Management (EAAM) is produced and endorsed by MAFE* (representatives of community aquaculture farms, aquaculture companies and their associationas will participate in discussion and development of the National Sustainable Aquaculture Development Plan);
•***Output 1.3:*** *MAFE has a comprehensive aquaculture site selection, permitting, and environmental monitoring framework based on GIS database for Ecosystem Approach to Aquaculture Management (EAAM)* (represntatives of community aquaculture farms, aquaculture companies and their associationas will be involved in the process of testing of the aquaculture site selection, permitting, and environmental monitoring framework);
•***Output 2.1:*** *National Ecosystem Approach to Aquaculture Management (EAAM) Farming Standard is introduced to controlling government agencies and aquaculture farmers through a training program* (will include training, mentoring, and grant support to small aquaculture community farms on the National EAAM Farming Standard);
•***Output 2.3:*** *Ecosystem Approach to Aquaculture Management (EAAM) hatcheries are established in Palau* (will provide technical support and mentoring to two EAAM hatcheries established on the base of community aquaculture farms);
•***Output 3.1:*** *Participatory M&E, communication, and gender mainstreaming framework developed and implemented for the project* and ***Output 3.2:*** *Lessons learned from the project are shared nationally and internationally to promote EAAM* (represntatives of community aquaculture farms, aquaculture companies and their associationas will be involved in the process of the project M&E and lessons learning)

All prospective private sector partners will be expected to comply with the requirements of UNEP?s Partnership Policy and Procedures (2018). Private Sector partners will also be expected to uphold the principles and standards of UNEP?s Environmental and Social Sustainability Framework (2020) and comply with all safeguards risk management activities of the project.

5. Risks to Achieving Project Objectives

Elaborate on indicated risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and, if possible, the proposed measures that address these risks at the time of project implementation.(table format acceptable):

116. During the PPG process and ESSF assessment, a set of key project risks was identified (see Table below). The risks are divided in two categories: (1) the external and internal risks to the project implementation, achievement and sustainability of the project results; and (2) the risks that can be produced by the project itself in social and environmental spheres (ESSF risks) at national and/or project area levels.

The project will monitor both categories of risks quarterly and report on the status of the risks to the UNEP. Management responses to High risks will also be reported to the GEF in the annual PIRs.

Project Risks and Risk Management Measures

Risk Description	Impact (I), Probability (P) and Risk Level (RL)	Risk Management Measures
Risks to the project implementation, achievement, and sustainability of the project results		
Another Covid-19 pandemic or national outbreak may disrupt and delay the project implementation due to travel and meeting restrictions.	I=3 P=3 RL=9 **Medium**	Starting January 2020 and till December 2022 there have been **5,955 confirmed cases** of COVID-19 with **9 deaths in Palau**. By the end of 2022 Palau had 18,285 fully vaccinated people (almost 100% of the country?s population)[1]. Despite this very high level of vaccination, there is still a 2% chance of a COVID-19-like pandemic in any given year, and the risk is likely to increase with a climate change[2]. To mitigate the risks during the project implementation the following measures will be used: ? PMU will monitor Covid-19 situation at national level; ? MAFE and PMU will explore options to conduct the Inception Workshop, Project Steering Committee, and other stakeholder meetings, events, and trainings remotely through on-line platforms and/or with limited number of participants practicing protective measures; ? The project is designed based on the partnerships with organizations mainly located in Palau that will limit the needs of international travel to implement the project; ? Part of the project Outputs (e.g., for Component 1) can be delivered remotely via on-line tools, if necessary; ? Some of the project activities can be reasonably delayed until restrictions are over in the framework of adaptive management and later fast-tracked for implementation; ? The GEF will be informed in case of delays and the project can request a reasonable extension to deliver all Outputs; ? See Appendix 20. COVID-19 Analysis and Recommended Measures for further details

Another Covid-19 pandemic may continue to disrupt the country?s aquaculture sector and may negatively impact Government co-financing commitments to the project	I=3 P=3 RL=9 **Moderate**	In 2020-2021 because of COVID pandemic and government restrictions many community aquaculture farms in Palau temporarily stopped functioning. In case of another COVID pandemic it may happen again and interrupt the project implementation under Component 2. Additionally, this risk can negatively influence the project implementation through insufficient co-financing (e.g., lack of government and private sector funds due to disruption of national economy because of restrictions). To mitigate the risk the PMU will implement the following measures: ? Adjust the project activities to focus mainly on locally-dependent aquaculture farming not requiring imported feed and explore options for an alternative aquaculture feed (Outputs 2.2 and 2.3); ? Review and prioritizing of the project activities to ensure GEF funding and co-financing is sufficient for the most important of them; ? Leverage additional resources from international donors and NGOs to mitigate impact of insufficient government and private sector co-financing. ? See Appendix 20. COVID-19 Analysis and Recommended Measures for further details

Policy, legislation, frameworks, and standards developed by the project may remain unofficial or take a time behind the project lifetime to be approved by the Palau Government.	I= 3 P=2 RL=6 **Moderate**	Despite relatively high political commitment of the Palau government to develop national aquaculture sector in sustainable way, many previously developed documents targeting aquaculture in Palau (e.g., *National Aquaculture Strategy (FAO 2009)*, *National Policy for Strengthening Food Security in Palau as a Priority Climate Change Adaptation Measure (2015), Aquaculture and Fisheries Action Plan (2008)* have never been approved by the Palau Government. This is one of the key issues with low aquaculture development in the country. This situation may happen again in the project framework. To avoid this situation the PMU will work directly with MAFE and other national agencies: ? Fully involve them in the sustainable aquaculture policy, legislation frameworks, and standards development process. To ensure timely policy, legislation, and plan approval by the Palau Government, the project will establish an aquaculture policy and planning working groups for Outputs 1.1-1.3 with involvement all interested government agencies, private sector, and NGO stakeholders. The working groups will be involved in the policy drafting from initiation, will lead all discussions on the new or updated policy with stakeholders, and lobby for approval of the developed policy and legislation or plans by relevant government body. This measure will ensure high involvement of government agencies in the policy and legislation drafting and planning process right from the start and at the same time will provide a pressure on the government agencies from interested private sector representatives and communities to ensure the official policy, plan, and framework approval; ? Discuss, agree with Palau Government, and strictly follow on the process of review and approval of the sustainable aquaculture policy, legislation frameworks, and standards; ? Reflect the sustainable aquaculture policy, legislation frameworks, and standards Government approval process and reserve appropriate timeframe for that in the Project Annual Work Plans; ? Monitor the process of the Government approval quarterly and report all delays in the process to MAFE and PSC to take corrective actions; ? Involve UNEP in discussion and problem-solving with the Palau Government in case of delays to approve produced by the project policy, legislation frameworks, and standards.
Low interest from aquaculture famers and local communities to the project implementation	I=4 P=1 RL=4 **Low**	This is a very low chance that local aquaculture farmers will not be interested in the project. Local aquaculture farmers are already well aware about the project, took active part in the PPG Inception Workshop, and provided a lot of ideas for the project. However, to promote active stakeholder involvement the project has a Stakeholder Engagement Plan (see Appendix 18) and will practice fully participatory approach to the project implementation. This approach will decrease the risk to the lowest level possible.

Due to low capacity for sustainable aquaculture in Palau the project may result in development of the ?business as usual? models of aquaculture farming with high level of pollution and low contribution to biodiversity conservation	I=3 P=3 RL = 9 **Moderate**	Due to lack of clear boundary between sustainable and unsustainable aquaculture, there is always a significant risk to achieve ?business as usual? results instead of planned ?sustainable aquaculture?. The project will manage this risk with a lot of attention through almost all project activities. The following measures to mitigate the risk will be applied: ? The project will apply the Ecosystem Approach to Aquaculture Management (EAAM) to all activities; ? The project will develop a National EAAM Farming Standard with clear criteria for sustainable aquaculture in Palau; ? The project will build the country capacity to develop aquaculture along the National EAAM Farming Standard among farmers and controlling agencies; ? The project will support MAFE to develop and implement environmental monitoring system to support the implementation of the National EAAM Farming Standard in Palau; ? The project will not provide any support to unsustainable aquaculture models
Sustainable aquaculture models introduced by the project may be negatively affected by the effect of climate change (through sea level rise, increasing temperature, increasing storm activity, etc). See brief analysis of climate change impact in the section Threats, pp. 9-10.	I=3 P=4 RL=12 **Moderate**	Research of climate change impact on aquaculture identify the potential for increased aquatic animal diseases and harmful algal booms, infrastructural damage from floods and storms, and decreasing availability of fresh water and wild seed[3]. Extreme weather effects can damage or destroy community aquaculture farms and hatcheries supported by the project. At the same time sustainable aquaculture is considered as a way to decrease pressure on wild fisheries that will be depleted due to climate change and a measure to increase food security in Palau. To mitigate the risk the project will: ? Under the Output 1.2 the project will produce National Sustainable Aquaculture Development Plan 2025-2030 that will analyze potential impact of climate change in aquaculture and develop a few scenarios of sustainable aquaculture progress under impact of climate change; ? Under the Output 1.3 the project will introduce a comprehensive aquaculture site selection, permitting, and environmental monitoring framework that will integrate climate change scenarios from the Output 1.2. Thus, the system will be able to identify sites potentially highly vulnerable to climate change; ? Under Output 2.1 the project will provide technical and grant support to small community aquaculture farms located in different areas of the country to decrease the probability that can be all damaged or destroyed by a storm***[4]***; ? Overall, the project will decrease climate change impacts on wild fisheries and local communities food security through decreasing pressure on the fisheries and producing significant amount of sustainable and healthy food for Palau citizens; ? Additionally, the project will encourage aquaculture farmers to use hazard event insurance to protect their investments in aquaculture farms (through the Output 2.1)
Social and Environmental (SES) Risks that may be triggered by the project		

The project could impose a potential health risk to the project stakeholders and partners via COVID-19 contraction during the project related meetings and activities All project meetings, workshops, and trainings may accelerate the risk of COVID-19 contraction by the project partners and stakeholders in case of repetitive COVID pandemics.	**I=2** **P=3** **Moderate**	To mitigate the threat of COVID-19 contraction by project stakeholders and partners during project events the PMU will exercise the following prevention and mitigation measures: ? PMU will monitor Covid-19 situation at national level and in the project area; ? MAFE and PMU will explore options to conduct the Inception Workshop, Project Steering Committee, and other stakeholder meetings remotely through on-line platforms and/or with limited number of participants practicing protective measures; ? The project is designed on the partnerships with organizations mainly located in Palau that will limit the needs of international travel to implement the project and decrease probability of COVID-19 spread; ? Some of the project activities can be reasonably delayed until restrictions are over in the framework of adaptive management and later fast-tracked for implementation; ? In case of considerable delays due to COVID-19 the project will inform GEF and will request a no cost extension; ? See Appendix 20. COVID-19 Analysis and Recommended Measures for further details

The project could lead to women discrimination via support of traditionally male-dominated activities such as aquaculture farming and marine resources management Activities to produce sustainable aquaculture policy and develop sustainable aquaculture capacity that will be supported by the project are traditional male domains in Palau (Outputs 1.1-1.3, 2.1-2.3). Thus, the project can potentially give some advantages in this field to males and potentially discriminate females from participation in the project management and activities, including development and implementation of the community sustainable aquaculture projects	**I=4** **P=2** **Moderate**	To avoid potential gender disequilibrium in the project implementation, Gender Mainstreaming Plan was developed (Appendix 16). At the project Inception Phase the PMU will implement and annually update the Gender Mainstreaming Plan designed to ensure women inclusion in delivery of all project Outputs. The key project strategy to mitigate the potential negative impact is to involve women as well as poorest and marginalized people of the project sites in the project activity through the fully participatory approach. To control the adequate support to women rights and gender equality during the project implementation all monitoring and evaluation missions for the project will be designed using a participatory approach with clear opportunities for women to ensure that their voices are heard by the PMU, Project Steering Committee, and Independent Evaluators and taken in account into project management.

The project can potentially lead to increased waste disposal in marine environment from the aquaculture farms It is well-known that in case of poor management and organization aquaculture farms can produce a lot of waste and contribute to pollution of marine environment and sensitive marine ecosystems	**I=1** **P=1** **Low**	Current level of aquaculture development in Palau is low (only 40-45 active small aquaculture farms) and its impact on the marine environment is insignificant. The project goal is even to decrease the current low aquaculture impact through introduction of sustainable aquaculture standards in Palau. All project Outputs are designed to achieve this objective, support implementation of the National EAAM Farming Standard, and develop capacity of the government to effectively monitor environmental impact of aquaculture farms. Despite its low level, this risk will be monitored on quarterly or semi-annual basis by PMU in cooperation with BoF, EQPB, and local aquaculture farmers.

Climate Change Effects projected in Palau and related to sustainable aquaculture: Unprecedented changes in temperature, intensifying storms, extreme rainfall, and sea level rise bring new threats to Palau?s marine ecosystems, including fringing and barrier reefs, marine lakes, seagrass beds, estuaries, etc. Oceans are warming, causing the conditions for coral bleaching events to become more common and severe. If current trends in rising ocean temperatures continue, Palau is likely to experience widespread coral bleaching in the next two decades. Coral reefs provide habitat for fish, coastal protection from storms, and bring tens of millions of dollars annually into the local economy[5]. Climate change and ocean acidification may result in 20% decline in coral reef fish by 2050[6]. Rapidly changing conditions also affect open sea fisheries. Under a business as usual scenario for 2100 maximal potential catch is projected to decline by more than 50% for most islands in central and western Pacific including Palau[7]. Research of climate change impact on aquaculture identify the potential for increased aquatic animal diseases and harmful algal booms, infrastructural damage from floods and storms, and decreasing availability of fresh water and wild seed[8]. Palau?s Climate Change Policy (2015) identifies disruption of food supply and food production systems as the key risk. In Palau estimated 80-82% of food is imported, and heavy dependence on imported foods may increase Palau?s vulnerability, since it is highly likely that climate change will raise prices of imported foods[9]. Extreme weather events, like storms, are projected to increase in frequency and magnitude with climate change. Storms directly impact aquaculture farms and hatcheries in Palau. For instance, during Typhoon Surigae (2021), 14% of tanks in PMDC were affected, with mass mortality of 20,000 clam seedlings. Generators failed in the National Aquaculture Center, leading to the loss of 64 brood-stock[10].

[1] World Health Organization: https://covid19.who.int/region/wpro/country/pw

[2] https://www.gavi.org/vaccineswork/new-study-suggests-risk-extreme-pandemics-covid-19-could-increase-threefold-coming

[3] Barange et al. 2018. Impacts of climate change on fisheries and aquaculture: synthesis of current knowledge, adaptation and mitigation options. FAO.

[4] The 2022 National Environmental Management Strategy (NEMS) focuses on diversifying and decentralizing supply of seedlings as a key mechanism to increase climate resilience of aquaculture farms

[5] Miles et al. 2020. Climate Change in Palau: Indicators and Considerations for Key Sectors. Report for the Pacific Island Regional Climate Assessment. Honolulu.

[6] Bell and Taylor. 2015. Building Climate Resilient Food Systems for Pacific Islands. Program Report

[7] Asch et al. 2018. Future marine ecosystem drivers, biodiversity, and fisheries maximum catch potential in Pacific Island countries and territories under climate change. Marine Policy, 88, 285-294.

[8] Barange et al. 2018. Impacts of climate change on fisheries and aquaculture: synthesis of current knowledge, adaptation and mitigation options. FAO.

[9] USGCRP 2018. Impacts, Risks, and Adaptation in the United States: Fourth National Climate Assessment. Vol. 2

[10] Personal communication of PPG team with stakeholders

6. Institutional Arrangement and Coordination

Describe the institutional arrangement for project implementation. Elaborate on the planned coordination with other relevant GEF-financed projects and other initiatives.

The **Project Implementing Agency** ? The United Nations Environment Programme (UNEP) is the GEF?s Implementing Agency for this project. UNEP will implement the project through its Ecosystems Division and will be responsible for overall project supervision. UNEP will also monitor implementation of the activities undertaken during the execution of the project and will provide the overall coordination and to ensure that the project is in line with UNEP?s Medium-Term Strategy and its Program of Work (PoW). Project supervision is entrusted to the UNEP/GEF Task Manager (TM) and Fund Management Officer (FMO). UNEP will bring to bear its vast scientific and empirical experience of critical relevance to the objectives of the project through sharing experiences of its other projects being supported by GEF or other agencies. Other specific Implementing Agency responsibilities include ensuring compliance with GEF policies and standards for results-based M&E, fiduciary oversight, safeguards compliance, project budget approvals, technical guidance and oversight of project outputs, approval of Project Implementation Reports

(PIRs), participation in the project?s superior governance structure, preparation of the project?s Terminal Evaluation.

The **Project Executing Agency** for this project is the Ministry of Agriculture, Fisheries, and Environment (MAFE). The Executing Agency is the entity to which the UNEP has entrusted the implementation of the GEF assistance specified in this signed project document along with the assumption of full responsibility and accountability for the effective use of GEF resources and the delivery of outputs, as set forth in this document. The Executing Agency is responsible for executing this project. Specific tasks include:

? Project planning, coordination, management, implementation, monitoring, evaluation and reporting. This includes providing all required information and data necessary for timely, comprehensive and evidence-based project reporting, including results and financial data, as necessary. The Executing Agency will strive to ensure project-level M&E is undertaken by national institutes and is aligned with national systems so that the data used and generated by the project supports national systems;

? Risk management as outlined in this Project Document;

? Procurement of goods and services, including human resources;

? Financial management, including overseeing financial expenditures against project budgets;

? Approving and signing the multiyear workplan;

? Approving and signing the combined delivery report at the end of the year; and,

? Signing the financial report or the funding authorization and certificate of expenditures.

The **Project Steering Committee (PSC)** is the project?s superior governing body responsible for taking corrective action as needed to ensure the project achieves the desired results. The PSC will be chaired by the Secretary General, MAFE, and will consist of the representatives of MAFE, BoF, BoE, EQPB, Governors Association, PAA, NGO representatives (e.g., TNC and PCS), and NDBP. The PSC will be formed during the project inception phase and will meet at least once per year. Specific responsibilities of the PSC include:

? Provide overall guidance and direction to the project, ensuring it remains within any specified constraints;

? Address project issues as raised by the project manager;

? Provide guidance on new project risks, and agree on possible mitigation and management actions to address specific risks;

? Advise on major and minor amendments to the project within the parameters set by UNEP-GEF;

? Ensure coordination between various donor and government-funded projects and programmes;
? Ensure coordination with various government agencies and their participation in project activities;

? Track and monitor co-financing for this project;
? Review the project progress, assess performance, and appraise the Annual Work Plan for the following year;
? Appraise the annual project implementation report, including the quality assessment rating report;
? Ensure commitment of human resources to support project implementation, arbitrating any issues within the project;

? Review combined delivery reports prior to certification by the Executing Agency;

? Provide direction and recommendations to ensure that the agreed deliverables are produced satisfactorily according to plans;

? Address project-level grievances;

? Approve the project Inception Report, Mid-term Review and Terminal Evaluation reports and corresponding management responses;

•Review the final project report package during an end-of-project review meeting to discuss lesson learned and opportunities for scaling up.
•Ensure highest levels of transparency and take all measures to avoid any real or perceived conflicts of interest;
•Supervise and coordinate project activities on gender mainstreaming.

Project Management Unit (PMU): The Project Management Unit will be located in Koror at the MAFE headquarter and consist from the following staff: Project Manager; Sustainable Aquaculture Officer; E&M, KM and Communication Officer, and Finance & Administration Assistant. All Project Management Unit staff will be appointed by the MAFE.

? **Project Manager** (full time, based in Koror) will lead the PMU and will have the authority to run the project on a day-to-day basis on behalf of the Executing Agency. The Executing Agency appoints the Project Manager, who must be different from the Executing Agency?s representative on the PSC. The Project Manager?s primary responsibility is to ensure that the project produces the results specified in the project document, to the required standard of quality and within the specified constraints of time and cost. The Project Manager will inform the PSC and the UNEP of any delays or difficulties as they arise during implementation so that appropriate support and corrective measures can be adopted. The Project Manager will remain on contract until the Terminal Evaluation report and the corresponding management response have been finalized and the required tasks for operational closure and transfer of assets are fully completed. The Project Manager will be directly responsible for timely development of the project Annual Work Plans, organization of the PSC meeting, timely and effective delivery of the project Outputs, project M&E and KM, quarterly and annual reporting of the project results, procurement of the required goods and services. The Project Manager will work 34% of his time on the project management. Other 66% of the Project Manager time will be used to ensure delivery of project Outcome 1. Specifically, he/she will work directly with different partners and stakeholders to develop Annual Work Plan activities and activity budgets for the Outputs under Outcome 1; procure required services and goods to deliver Outputs under the Outcome; monitor the Outputs delivery; develop quarterly and annual reports for the Outcome 1; participate in obtaining GEF and PRF indicator values; doing project risk assessment and implementation of the risk management measures related to the Outcome 1; report to the PSC on the Output delivery for

the Outcome 1; organize in cooperation with key partners of the Outcome 1 events and participate in the Outcome 1 communication activities. See specific tasks of the Project Manager in the Appendix 9.

? **Sustainable Aquaculture Officer** (full time, based in Koror) will be responsible for for timely and high quality delivery of the project Outputs under the Outcomes 2. The officer will spend 100% of work time on the technical support of activities under Outcome 2. The officer will be appointed by the Executing Agency and will work directly with different partners and stakeholders in the project area to develop a multi-year and Annual Work Plan activities and activity budgets for the Outputs under Outcomes 2; procure required services and goods to deliver Outputs under the Outcome; monitor the Outputs delivery; develop quarterly and annual reports for the Outcome 2; participate in collection of the GEF and PRF indicator values for the Outcome 2; assist the Project Manager in project risk assessment and implementation of the risk management in relation to the Outcome 2; collect grievances of the local communities on the project and address them with support of the PMU and PSC; report to the PSC on the Output dleivery for Outcome 2; organize in cooperation with key partners the Outcome 2 events and participate in the Outcome 2 communication activities. See specific tasks of the Sustainable Aquaculture Officer in the Appendix 9.

? **M&E, KM, Gender and Communication Officer** (full time, based in Koror) will be directly responsible for timely and high quality delivery of the project Outputs under the Outcome 3. The officer will spend 100% of the work time on the direct support of the Outcome 3 activities. The officer will will be appointed by the Executing Agency and will work directly with the PMU staff, different partners and stakeholders in the project area to develop a multi-year and Annual Work Plan activities and activity budgets for the Outcome 3; procure required services and goods for the Outcome 3; monitor delivery of the M&E, KM, and communication activities for Outputs 3.1 and 3.2; develop quarterly and annual reports for the Outcome 3; annualy update project Gender Mainstreaming Plan, Stakeholder Engagement Plan and ensure their implementation through delivery of all project Outputs; lead on obtaining GEF and PRF indicator values for the project Objective and Outcomes with suport from other PMU staff; advise the Project Manager on project risk assessment and implementation of the risk management on quarterly basis; lead the PMU on reviewing and solving local grievances on the project in cooperation with PSC; report to the PSC on the project Outcome 3 achievements; organize in cooperation with key partners KM and communication events; organize and lead on the project communication activities. See specific tasks of the KM and Communication Officer in the Appendix 9.

? **Finance & Administration Assistant** (full-time, based in Koror) will will be appointed by the Executing Agency and will assit the Project Manager and other PMU staff to set up the project annual work plans (AWP) in relevant operating systems; track and monitor the use of allocations, track approval of budget revisions and their uploading; create e-requisitions, check budget for accuracy, and do receipts for payments; generate financial reports and prepare monthly delivery monitoring tables for the assigned project, check for correctness, identify issues, contribute to development of solutions; support project

management in performing budget cycle: planning, preparation, revisions, and budget execution; process all types of payment requests for settlement purposes including quarterly advances to the partners upon joint review; monitor budget expenditures, ensuring that no expenditure is incurred before it has been authorized and maintain a proper record of commitments and planned expenditures; ensure that contractual processes follow the stipulated UNEP and GEF procedures (100% of work time on the project management). See specific tasks of the Finance & Administration Assistant in the Appendix 9.

The PMU will directly work with **project partners (Responsible Parties) and stakeholders** for each project Outcome to deliver the project Outputs. Selected by PMU and MAFE Responsible Parties will be responsible for delivery of the key project Outputs or particular Activities via contractual agreements with PMU. The full project implementation diagram is shown in Figure 5.

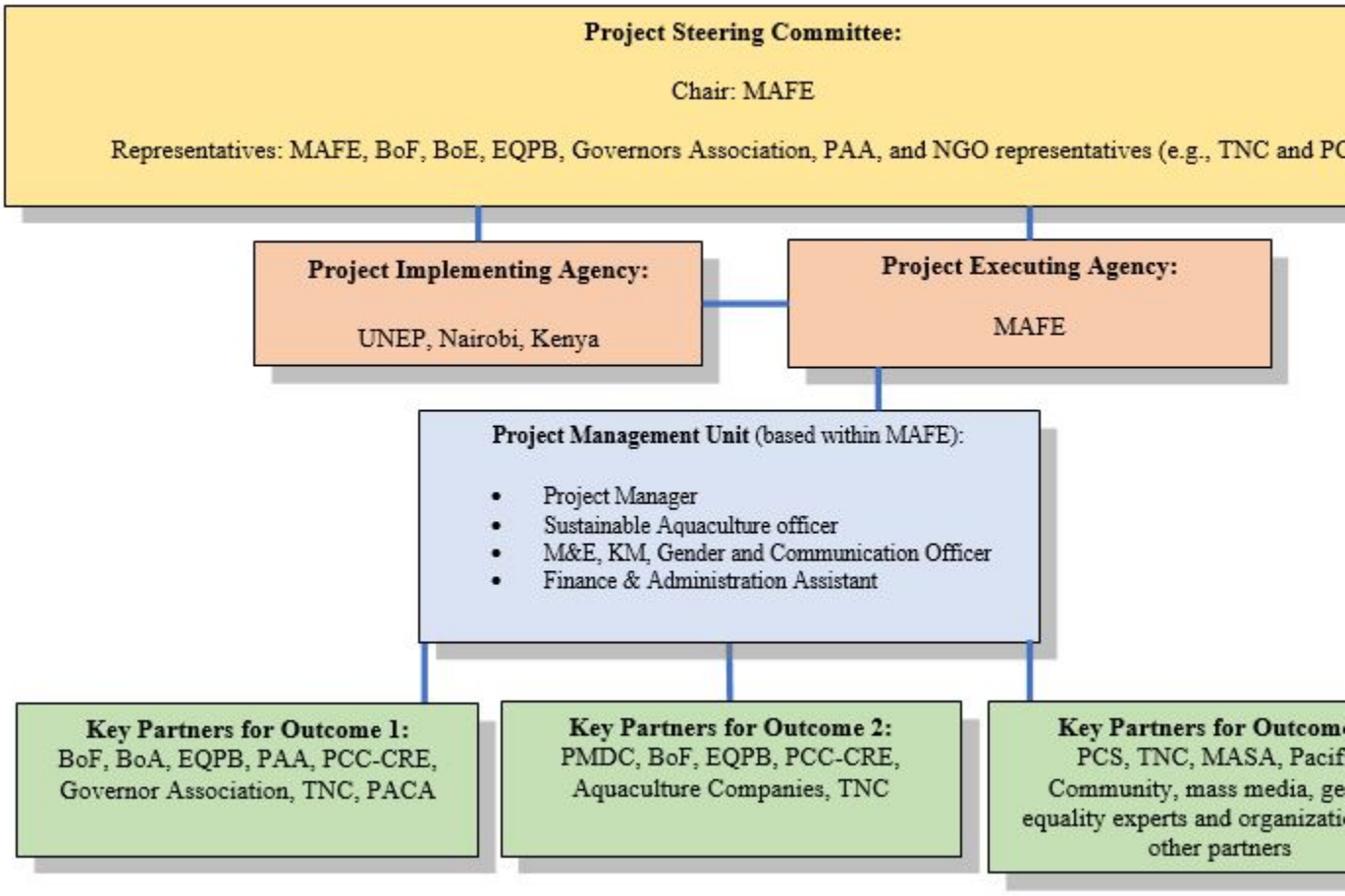

Figure 5. Project Management Arrangements

7. Consistency with National Priorities

Describe the consistency of the project with national strategies and plans or reports and assesments under relevant conventions from below:

NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, INDCs, etc.

The project is fully aligned with national sustainable development priorities. Thus, it will directly contribute to implement the Republic of Palau National Biodiversity Strategy and Action Plan (NBSAP) 2015-2025. The project will directly support implementation of the Strategic Area 5 - *Reducing Direct Pressures on Biodiversity Through Sustainable Use* of the NBSAP, where ?sustainable use of biodiversity will be achieved by establishing industry-specific guidelines for best sustainability practices, with particular attention paid to the tourism industry, cultivated biological resources (aquaculture, agriculture, agroforestry)?.[1] The Goal 5 - *Establish an enabling framework to support sustainable biodiversity use and biodiversity based livelihoods* of NBSAP has an indicator *Number (and land/sea area, where appropriate) of commercial aquaculture, agriculture and forestry operations regularly using best practices or otherwise determined to be meeting sustainability guidelines*. Also, sustainable aquaculture is a subject of the Objective 5.2 of the NBSAP: *Establish guidelines and standards to ensure sustainable aquaculture, agriculture and forestry development and management*. Through the Component 1 the project will provide necessary policy and legal basis for sustainable aquaculture as well as suggest the National EAAM Farming Standard as the key guidelines mentioned under Objective 5.2.

Additionally, the project is in line with the Palau Infrastructure Investment Plan 2021?2030, with one of the objectives stated as: *?the sustainable economic development and management of the marine and coastal resources of Palau?*. Under this objective ?the government intends to improve the policies, legislation, regulation and management of all its fisheries and to further research and help develop commercial aquaculture?.

The suggested project is in consistency with the *?Achieving Resilient Agriculture and Aquaculture: A national policy for strengthening food security in Palau as a priority climate change adaptation measure?*. The draft policy have the following targets: *?By 2020, 50% of Palau's Agriculture and Aquaculture farms are sustainably managed?, ?By 2020, a 25% increase in existing aquaculture operations suitably located & managed in the seascape,* and *?By 2018, a 50% increase in the number of agriculture & aquaculture farms in compliance with discharge regulations of EQPB?.*

The project is in line with the *Aquaculture and Fisheries Action Plan (2008)* that provides general guidance for development of sustainable aquaculture in Palau. The Plan has 3 Strategies equivalent to the project Components: *Strategy 1: Improve Policy and Regulation* that is consistent with the project Component 1, *Strategy 2: Institutional Development* that is reflected in the project Component 2, and *Strategy 3: Increase Sustainable Production and Income Opportunities* that is consistent with the project Component 3. Also, the project will directly contribute to the *National Environmental Management Strategy (NEMS*) 2022-2030 (specifically Strategic Focus Area 3.4: Aquaculture Management and will completely fulfil Action 3.4.1: Update and modernize the National Aquaculture Policy); the Pathways to Sustainable Food Systems in Palau (specifically Pathway 1: *Blue Economy Powering Green Growth*, Action 3: Innovative and low-impact use of nearshore marine habitats by expanding vastly on high-value giant clam aquaculture; and Pathway 2: Partnerships for Production, which includes private-public partnerships to advance nature-positive and carbon neutral production by raising aquaculture capacity and climate change mitigation and adaptation by

establishing resilient seedling banks); and the *Blue Prosperity Plan* (Key initiative 3: Restorative Aquaculture, and will fulfill targeted actions to develop a National Aquaculture Policy that includes a zoning system and streamlined permitting, with an emphasis on giant clams and finfish).

Additionally, the project will directly deal with the development challenges the country faces (depletion of wild fisheries, degradation of marine ecosystems, food insecurity, and climate change) and will directly contribute towards the attainment of the country?s SDGs such as **Goal 1** No Poverty (via supporting sustainable aquaculture development in the country as a good source of income and capacity building for local aquaculture farmers), **Goal 2** Zero Hunger (via increasing food security in Palau through sustainable aquaculture production), **Goal 8** Decent Work and Economic Growth (via providing sustainable aquaculture sector with necessary for effective development policy, legislation, frameworks, and plans), and **Goal 10** Reduced Inequalities (via involvement of women in the aquaculture development); **Goal 13** Climate Action (via strengthening adaptive capacity of Palau to address climate change impacts on wild fisheries and food security) and **Goal 14** Life below Water (via development of sustainable aquaculture approaches that directly contribute to biodiversity conservation).

The last but not least, the project is designed to contribute to the **United Nations Pacific Strategy (UNPS) 2018-2022**, specifically the Output 1 - *Climate Change, Disaster Resilience and Environmental Protection*, Output 2 - *Gender Equality*, and Output 3 - *Sustainable and Inclusive Economic Empowerment*.

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[1] Republic of Palau National Biodiversity Strategy and Action Plan (NBSAP) 2015-2025, p. 18

8. Knowledge Management

Elaborate the "Knowledge Management Approach" for the project, including a budget, key deliverables and a timeline, and explain how it will contribute to the project's overall impact.

An effective M&E system (Output 3.1) and regular analysis of M&E data will allow the project: (i) to identify the most effective project strategies; (ii) to check project assumptions (hypotheses) and risks; (iii) to prepare management response to changing political, economic, and ecological environment; (iv) to learn from successful and unsuccessful project experience; (v) to incorporate learning in the project planning and adaptive management; and (vi) share experience among GWP, GEF and other projects in Pacific and the world. For the Knowledge Management (KM) the project has specially designed Output 3.2. Lessons learned through the project cycle will be reflected in the Quarterly and Annual Project Reports to ensure that the project uses the most effective strategies to deliver project Outputs and achieve project Outcomes in the changing environment.

To systemize and share its lessons and knowledge, the project will use different communication means including:

? A project Communication and KM Strategy that will be developed at the inception phase and updated annually;

? A project web page or a web-site with available project reports, publications, press-releases, datasets, draft and final legislative documents, developed management plans, etc.;

? Annual project information bulletin;

? Special paper publications, including manuals, guidance, methodologies, etc.;

? Collaborative and experience exchange meetings with other similar projects in Pacific;

? Exchange visits for local communities and government agencies to demonstrate the best practices;

? Stakeholders Knowledge Exchange Events hosted by MAFE;

? Publications in mass media, conservation, and scientific journals; and

? Other available communication tools and approaches.

All communication and knowledge management activities will apply a gender sensitive approach with following principles:
- Use male and female knowledge product and public education developers for diversity of perspectives and approaches, as well as male and female reviewers of these products;
- Use gender sensitive language and gender balanced images (women not presented as victims but as agents of change);
- Check context and content (use gender analysis; use convincing gender arguments based on reliable sources and qualitative and quantitative data including sex disaggregated data);
- Refer to international and national gender policy framework, policies, strategies and plans, as applicable and appropriate.

In accordance with a communication strategy (Output 3.2) the project will implement targeted outreach campaign at the national level with focus on sustainable aquaculture and its role in conservation and food security. The campaign will reach general public and local communities through social media, mobile phone messages, local newspapers, TV, and radio. The effectiveness of the campaign will be monitored through the project M&E and it will contribute to the project Knowledge Management and lessons learning.

The project will use opportunities to learn from other countries and projects as well as share with them its own lessons (both on success and failure) during the implementation phase. In particular, Micronesia, Indonesia, and Philippines are the most important project peers to share experience and best practices on sustainable aquaculture development. For instance, the project can meaningfully contribute to implementation of the Micronesian Association for Sustainable Aquaculture (MASA)? and Pacific Community?s programs. Additionally, the project will specifically learn from successful Philippines and Indonesia experience on aquaculture policy and governance. The South-South learning exchange will be implemented in the framework of the project Knowledge Management through the following mechanisms:

? Pacific Community web-site: https://www.spc.int

? Micronesia Challenge http://themicronesiachallenge.blogspot.com ;

? The Blue Forest Solutions https://www.blueforestsolutions.com/ ;

? South-South Galaxy platform https://www.unsouthsouth.org/south-south-galaxy/;

? IUCN PANORAMA Solutions https://www.iucn.org/resources/conservation-tools/panorama;

? other knowledge sharing platforms.

In addition, to bring the voice of Palau to global and regional fora, the project will explore opportunities for meaningful participation in specific events where UNEP could support engagement with the global development discourse on sustainable aquaculture initiatives and CITES events. The project will furthermore provide opportunities for regional cooperation with countries that are implementing initiatives on sustainable aquaculture in geopolitical, social and environmental contexts relevant to the proposed project in Palau

The budget (and indicative timeline) for project knowledge management activities is summarised below:

KM Activities/Expenses	Timeline	Budget, USD
Travel expenses for the PMU to monitor PRF and GEF indicators (M&E), ESMP, stakeholder involvement plan, Gender Mainstreaming Plan, and GRM implementation (M&E), and extract lessons learned	Years 1-4	16,000
Part of the salary of the M&E, KM, Gender and Communication Officer (~20% of the work time for KM activities)	Years 1-4	17,280
Approximatelly 10% of the Sub-Contracts budget (Outputs 1.2, 2.1-2.3) will be used for extraction and description of the lessons learned by the Responsible Parties	Years 1-4	49,000
Approximatelly 10% of the budget (work time) for Mid-Term Review and Terminal Evaluation (M&E, International Consultants) will be used for extraction of the lessons learned	Years 2 and 4	5,000
Lessons learning and best practices workshops for the project partners and stakeholders (Output 3.2)	Years 2-4	30,000
Publication of the project materials, including lessons learned; print out for the project KM events (Output 3.2)	Years 2-4	20,000
Total:		**137,280**

9. Monitoring and Evaluation

Describe the budgeted M and E plan

In line with the GEF Evaluation requirements and UNEP?s Evaluation Policy, any project with a duration of 4 years or more will be subject to an independent Mid-Term Evaluation or management-led Mid-Term Review at mid-point.

All GEF funded projects are subject to a performance assessment when they reach operational completion. This performance assessment will be either an independent Terminal Evaluation or a management-led Terminal Review.

In case a Review is required, the UNEP Evaluation Office will provide tools, templates, and guidelines to support the Review consultant. For all Terminal Reviews, the UNEP Evaluation Office will perform a quality assessment of the Terminal Review report and validate the Review?s performance ratings. This quality assessment will be attached as an Annex to the Terminal Review report, validated performance ratings will be captured in the main report.

However, if an independent Terminal Evaluation (TE) of the project is required, the Evaluation Office will be responsible for the entire evaluation process and will liaise with the Task Manager and the project implementing partners at key points during the evaluation. The TE will provide an independent assessment of project performance (in terms of relevance, effectiveness and efficiency), and determine the likelihood of impact and sustainability. It will have two primary purposes: (i) to provide evidence of results to meet accountability requirements, and (ii) to promote learning, feedback, and knowledge sharing through results and lessons learned among UNEP staff and implementing partners. The direct costs of the evaluation (or the management-led review) will be charged against the project evaluation budget.

The TE will typically be initiated after the project?s operational completion. If a follow-on phase of the project is envisaged, the timing of the evaluation will be discussed with the Evaluation Office in relation to the submission of the follow-on proposal.

The draft TE report will be sent by the Evaluation Office to project stakeholders for comment. Formal comments on the report will be shared by the Evaluation Office in an open and transparent manner. The project performance will be assessed against standard evaluation criteria using a six-point rating scheme. The final determination of project ratings will be made by the Evaluation Office when the report is finalized. The evaluation report will be publicly disclosed and will be followed by a recommendation compliance process.

The evaluation recommendations will be entered into a Recommendations Implementation Plan template by the Evaluation Office. Formal submission of the completed Recommendations Implementation Plan by the Project Manager is required within one month of its delivery to the project team. The Evaluation Office will monitor compliance with this plan every six months for a total period of 12 months from the finalisation of the Recommendations Implementation Plan. The compliance performance against the recommendations is then reported to senior management on a six-monthly basis and to member States in the Biennial Evaluation Synthesis Report.

Further details on the M&E are provided in the Appendixes 3, 5, 6, 9, 13, and 14. A summary of the project M&E budget is provided in the table below.

Type of M&E activity	Responsible Parties	Budget from GEF, USD	Budget co-finance	Time Frame
Inception Meeting in Koror	Implementing Partner (MAFE)/UNEP/Project Manager	5,000	0	Within 2 months of project start-up
Inception Report	Project Manager	0	0	1 month after project inception meeting

Type of M&E activity	Responsible Parties	Budget from GEF, USD	Budget co-finance	Time Frame
Measurement of project indicators (outcome, progress and performance indicators, GEF tracking tools) at national	PMU and project partners	16,000 (4,000/yr)	0	Outcome indicators: start, mid and end of project Progress/perform. Indicators: annually
Semi-annual Progress/ Operational Reports to UNEP	Project Manager and PMU	0	0	Within 1 month of the end of reporting period i.e. on or before 31 January and 31 July
Project Steering Committee meetings	Implementing Partner (MEDD)/PMU	20,000 (5,000/year)	0	Once a year minimum
Reports of PSC meetings	Project Manager and PMU	0	0	Annually
PIR	Project Manager and PMU	0	0	Annually, part of reporting routine
Monitoring visits to field sites, including for monitoring/implementation Risk Register, and stakeholder engagement plan	PMU	12,000 ($3,000/year	0	As appropriate
Mid Term Review/Evaluation	UNEP/PMU, Independent evaluator (International)	20,000	0	At mid-point of project implementation
Terminal Evaluation	UNEP/PMU, Independent evaluator (International)	30,000	0	Within 6 months of end of project implementation
Project Final Report	Project Manager and PMU	0	0	Within 2 months of the project completion date
Co-financing report	Project Manager and PMU	0	0	Within 1 month of the PIR reporting period, i.e. on or before 31 July

Type of M&E activity	Responsible Parties	Budget from GEF, USD	Budget co-finance	Time Frame
Publication of Lessons Learnt and other project documents	Project Manager and PMU	15,000	0	Annually, part of Semi-annual reports & Project Final Report
Total M&E Plan Budget:		**118,000**	**0**	

10. Benefits

Describe the socioeconomic benefits to be delivered by the project at the national and local levels, as appropriate. How do these benefits translate in supporting the achievement of global environment benefits (GEF Trust Fund) or adaptation benefits (LDCF/SCCF)?

The project is designed to provide direct socio-economic benefits to at least 285-320 local people (at least 30% women) in the target communities living in the project sites ? around small aquaculture community farms. Thus, the project will directly support 30-35 small aquaculture farmers through a comprehensive training program, mentoring, and grant support for development of sustainable aquaculture (Output 2.1). $350,000 of the Component 2 funding will be spent to support sustainable aquaculture practices at ~15-20 small community farms with the level of investment of $17,550/farm in average, including technical and grant support. These sufficient levels of investment will allow to achieve sustainability in community aquaculture farming and livelihood of local communities in the project sites. Additionally, the project will establish two new hatcheries for sustainable aquaculture that will be able to provide with seedlings and fingerlings as well as on demand technical training at least 80-100 small community aquaculture farms. At least 250-280 local people will be provided with fresh sea food production from the supported by the project community aquaculture farms and will improve their diet, food security, and dependence on wild fisheries for subsistence. Through the benefits provided with the National EAAM Farming Standard certification, it is expected that income of the supported small aquaculture farms will increase at least 50-60%. Project gender mainstreaming plan?s implementation is expected to increase share of women involved in sustainable aquaculture at the supported farms.

11. 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
Low	Medium/Moderate		

Measures to address identified risks and impacts

Elaborate on the types and risk classifications/ratings of any identified environmental and social risks and impacts (considering the GEF ESS Minimum Standards) and any measures undertaken as well as planned management measures to address these risks during implementation.

Please refer to Appendix 15.

Supporting Documents

Upload available ESS supporting documents.

Title	Module	Submitted
GEF7_Palau-SRIF_SL_19Dec	Project PIF ESS	

ANNEX A: PROJECT RESULTS FRAMEWORK (either copy and paste here the framework from the Agency document, or provide reference to the page in the project document where the framework could be found).

Outcome	Indicator	Baseline	Mid-Term Target	End of The Project Target	Means of verification	Assumptions
Component 1: Enabling a supporting policy environment for development of Sustainable Aquaculture in Palau						
Outcome 1: Strengthened legal and institutional frameworks for Sustainable Aquaculture	Total number of policies/strategies/laws for Sustainable Aquaculture developed by the project and endorsed/implemented by the Government of Palau	0	>= 4 (policy and legal documents drafted, discussed with stakeholders, and submitted to the Government of Palau for approval)	>=4 (policy and legal documents officially approved by the Government of Palau and implemented)	GoP/MAFE decrees on official endorsement of the policies and laws; GoP/MAFE plans and reports on the policies/frameworks implementation **Annually**	Strategic documents, policies, and laws will be officially approved and supported for implementation by the GoP/MAFE and other government stakeholders during the project lifetime.
	Presence of the National Sustainable Aquaculture Development Plan endorsed by the Government of Palau	0	1 (the Plan drafted, discussed with stakeholders, and submitted to the Government of Palau for approval)	1 (the Plan officially approved by the Government of Palau and implemented)	GoP/MAFE decree or resolution on the Plan endorsement GoP/MAFE annual reports on the Plan implementation **Annually**	National Sustainable Aquaculture Development Plan endorsed by Governors Association and approved by GoP/MAFE during the project lifetime and supported for implementation

	Presence of the national aquaculture site selection, permitting, and environmental monitoring framework based on EAAM and endorsed by the Government of Palau	0	1 (the framework developed and submitted to the Governme nt of Palau for approval)	1(the framework officially approved by the Governmen t of Palau and implemente d)	GoP/MAFE decree or resolution on the framework endorsement GoP/MAFE annual reports on the framework implementation **Annually**	The national aquaculture site selection, permitting, and environmenta l monitoring framework based on EAAM approved by GoP/MAFE during the project lifetime and supported for implementati on
Outputs to achieve Outcome 1: **Output 1.1:** National policy and legislation updated to integrate Ecosystem Approach to Aquaculture Management (EAAM) **Output 1.2.** National Sustainable Aquaculture Development Plan based on the Ecosystem Approach to Aquaculture Management (EAAM) **Output 1.3.** MAFE has a comprehensive aquaculture site selection, permitting, and environmental monitoring framework based on GIS database for Ecosystem Approach to Aquaculture Management (EAAM)						
Component 2: Developing national capacity for Ecosystem Approach to Aquaculture Management (EAAM)						
Outcome 2: Strengthene d national capacity for Sustainable Aquaculture that contributes to conservation of marine biodiversity	Total number of community aquaculture farms/farmers practicing National EAAM Farming Standard	0 farms/0 farmers	>=5 farms/8-10 farmers (20% women)	>=15 farms/20 farmers (20% women)	National EAAM Farming Standard certificates awarded to aquaculture farms **Annually**	National EAAM Farming Standard is approved by GoP/MAFE during the project lifetime Community aquaculture farmers see benefits and advantages of the National EAAM Farming Standard certification

	Total number of government officers (BoF, BoE, EQPB) that have sufficient skills on the aquaculture site selection, permitting, and environmental monitoring in accordance with the National EAAM Farming Standard	0	>=15 (30% are women)	>=50 (30% are women)	Result of examination of the officers after completion of the training program **Annually**	National EAAM Farming Standard is approved by GoP/MAFE during the project lifetime
	Area of marine habitat under improved management through sustainable aquaculture (excluding protected areas) (GEF Core Indicator 5), ha:	0	Directly: >= 400 Indirectly: >= 5,000	Directly: >= 1,200 Indirectly: >= 25,500	GIS analysis of the distribution of the certified aquaculture farms (buffering with 500 m of direct influence area); analysis of coastal waters area covered by policy, legislation and plans for sustainable aquaculture **On Year 2 and Year 4**	National EAAM Farming Standard is approved by GoP/MAFE during the project lifetime Community aquaculture farmers see benefits and advantages of the National EAAM Farming Standard certification
Outputs to achieve Outcome 2: **Output 2.1.** National Ecosystem Approach to Aquaculture Management (EAAM) Farming Standard is introduced to controlling government agencies and aquaculture farmers through a training program **Output 2.2.** Bureau of Fisheries (BoF) has a modern lab for sustainable aquaculture development and environmental monitoring of aquaculture farms for implementation of the National Ecosystem Approach to Aquaculture Management (EAAM) Farming Standard **Output 2.3.** Pilot Ecosystem Approach to Aquaculture Management (EAAM) hatchery(s) and/or farm(s) is/are established in Palau						

Component 3: Knowledge management, gender mainstreaming, and monitoring and evaluation						
Outcome 3: Lessons learned by the project are applied nationally and internationally for promotion of Sustainable Aquaculture	Total number of best practices and lessons learned by the project that are applied by other projects in Palau and abroad	0	>=1	>=4	Project Annual Reports and analysis of the project models and lessons citations in the Internet **Annually**	Other project and programs in Palau and abroad are interested to study and apply the best practices and lessons generated by the project Other project and programs in Palau and abroad mentions the project in there reports, publications, and communication
	Total number of direct project beneficiaries (GEF Core Indicator 11):	0	>= 72 (at least 30% women)	>=360 (at least 30% women)	Quarterly and annual reports of the project partners that include number and lists of direct beneficiaries (including people received project training, mentoring, grant support; and people consuming production of the sustainable aquaculture farms supported by the project) PMU visits of the project sites to monitor the project activities **Annually**	Local people are interested in the project activities, take active part in the project implementation, and use the project?s products and services
Outputs to achieve Outcome 3: **Output 3.1.** Participatory M&E, communication, and gender mainstreaming framework developed and implemented for the project **Output 3.2.** Lessons learned from the project are shared nationally and internationally to promote EAAM						

ANNEX B: RESPONSES TO PROJECT REVIEWS (from GEF Secretariat and GEF Agencies, and Responses to Comments from Council at work program inclusion and the Convention Secretariat and STAP at PIF).

N/A

ANNEX C: Status of Utilization of Project Preparation Grant (PPG). (Provide detailed funding amount of the PPG activities financing status in the table below:

Project Preparation Activities Implemented	*GEF Amount (US$)*		
	Budgeted amount	*Amount spent to date*	*Amount committed*
International Consultant	34,653	3,465	31,188
National Consultant	10,000	10,000	0
Workshops and Meetings	5,347	2,000	3,347
Total	**50,000**	15,465	34,535

ANNEX D: Project Map(s) and Coordinates

Please attach the geographical location of the project area, if possible.

N/A

ANNEX E: Project Budget Table

Please attach a project budget table.

ANNEX F-1 - RECONCILIATION BETWEEN GEF ACTIVITY BASED BUDGET AND UNEP BUDGET LINE (GEF FUNDS ONLY US$)

Project title: Facilitating biodiversity conservation by enhancing aquaculture policy, planning, management, and production
Project number: GEF ID 10907
Project executing: Ministry of Agriculture, Fisheries and the Environment (MAFE)
Project implementation period:
From: 2023
To: 2027

Expenditure by project component/activity (provide description)
Add additional components/activities as required

UNEP Budget Line			Comp. 1	Comp. 2	Comp. 3	PMC	M&E (Output 3.1)	Total	Responsible Entity
10	**PERSONNEL COMPONENT**								
	1100	**Project personnel**							
	1101	Project Manager ($3,000/month * 48 months)	94,362	-	-	49,638.00	-	144,000	MAFE
	1102	Sustainable Aquaculture Officer ($2,000/month * 48 months)	-	96,000	-	-	-	96,000	MAFE
	1103	KM, M&E, Gender, and Communication Officer ($1,800/month * 48 months	-	-	86,400	-	-	86,400	MAFE
	1104	Finance and Administration assistant ($1,500 * 48 months)	-	-	-	72,000.00	-	72,000	MAFE
	1199	**Sub-total**	**94,362**	**96,000**	**86,400**	**121,638**		**398,400**	
	1200	Consultants							
	1201	National Consultant to develop the National Sustainable Aquaculture Policy (Output 1.1)	10,000	-	-	-	-	10,000	MAFE
	1202	International Consultant to develop the Aquatic Animal Health Management Strategy (Output 1.1)	10,000	-	-	-	-	10,000	MAFE
	1203	National Consultant to develop the National EAAM Farming Standard (Output 1.1)	10,000	-	-	-	-	10,000	MAFE
	1204	National Consultant to develop the Giant Clam Conservation Act (Output 1.1)	10,000	-	-	-	-	10,000	MAFE
	1299	**Sub-total**	**40,000**	**-**	**-**	**-**	**-**	**40,000**	
	1300	Administrative Support	-	-	-	-		-	
	1399	**Sub-total**	**-**	**-**	**-**	**-**		**-**	
	1600	Travel on official business							
	1601	Travel expenses for the PMU to monitor PRF and GEF indicators (Output 3.1 -M&E)	-	-	-	-	16,000	16,000	MAFE
	1602	Travel expenses for the PMU to monitor project risks, stakeholder involvement plan, Gender Mainstreaming Plan (Output 3.1 - M&E)	-	-	-	-	12,000	12,000	MAFE
	1699	**Sub-total**	**-**	**-**	**-**	**-**	**28,000**	**28,000**	
1999	**Component total**		**134,362**	**96,000**	**86,400**	**121,638**	**28,000**	**466,400**	
20	**SUB-CONTRACT COMPONENT**								
	2100	Sub-contracts (MOUs/LOAs for cooperating agencies)							
	2101		-	-	-	-		-	
	2102		-	-	-	-		-	
	2103		-	-	-	-		-	
	2199	**Sub-total**	**-**	**-**	**-**	**-**		**-**	
	2200	Sub-contracts (MOUs/LOAs for supporting organizations)							
	2201	Contract with selected project partner (organization) to conduct aquaculture policy and legislation analysis in Palau (Output 1.1)	10,000	-	-	-	-	10,000	MAFE
	2202	Contract with selected project partner (organization) to develop a National Sustainable Aquaculture Plan 2025-2030 (Output 1.2)	50,000	-	-	-	-	50,000	MAFE
	2203	Contract with selected project partner (organization) to develop aquaculture site selection, permitting, and environmental monitoring framework based on GIS database (Output 1.3)	50,000	-	-	-	-	50,000	MAFE
	2204	Contract with selected project partner (organization) to integrate the aquaculture site selection, permitting, and environmental monitoring framework based on GIS database into the inter-government digital database (Output 1.3)	50,000	-	-	-	-	50,000	MAFE
	2205	Contract with selected project partner (organization) to provide trainings and mentoring to BoF and EQPB staff on the aquaculture site selection, permitting, and environmental monitoring framework based on GIS database (Output 1.3)	20,000	-	-	-	-	20,000	MAFE
	2206	Contract with selected project partner (organization) to provide training and mentoring to selected community aquaculture farms on the National EAAM Standard and bussiness planning for sustainable aquaculture (Output 2.1)	-	120,000	-	-	-	120,000	MAFE
	2207	Contract with selected project partner (organization) to provide training and mentoring to BoF, BoE, and EQPB on the National EAAM Standard implementation (Output 2.1)	-	40,000	-	-	-	40,000	MAFE
	2208	Agreements with community aquaculture farms on the Low Value Grants for the sustainable aquaculture projects (Output 2.1)	-	130,000	-	-	-	130,000	MAFE
	2209	Contract with selected project partner (organization) to provide training and mentoring to BoF on the sustainable aquaculture lab management (Output 2.2)	-	20,000	-	-	-	20,000	MAFE
	2299	**Sub-total**	**180,000**	**310,000**	**-**	**-**		**490,000**	
	2300	Sub-contracts (for commercial purposes)							
	2301		-	-	-	-		-	
	2302		-	-	-	-		-	
	2303		-	-	-	-		-	
	2399	**Sub-total**	**-**	**-**	**-**	**-**		**-**	
2999	**Component total**		**180,000**	**310,000**	**-**	**-**		**490,000**	
30	**TRAINING COMPONENT**								
	3200	Group training							
	3201			-	-	-	-	-	
	3202		-	-		-		-	
	3203							-	
	3299	**Sub-total**	**-**	**-**	**-**			**-**	
	3300	Meetings/Conferences							
	3301	Budget for MAFE to organize stakeholder workshops to discuss and finalize policy and legislation documents developed under Output 1.1	20,000	-	-	-	-	20,000	MAFE
	3302	Budget to organize stakeholder workshops to discuss and finalize National Sustainable Aquaculture Development Plan 2025-2030 (Output 1.2)	20,000	-	-	-	-	20,000	MAFE
	3303	Organization of the Inception workshops in Koror (Output 3.1 -M&E)	-	-	-	-	5,000	5,000	MAFE
	3304	Annual Project Steering Committee meetings (Output 3.1 -M&E)	-	-	-	-	20,000	20,000	MAFE
	3305	Lessons learning and best practices workshops for the project partners and stakeholders (Output 3.2)	-	-	30,000	-	-	30,000	MAFE
	3399	**Sub-total**	**40,000**	**-**	**30,000**	**-**	**25,000**	**95,000**	

ANNEX F: (For NGI only) Termsheet

Instructions. Please submit an finalized termsheet in this section. The NGI Program Call for Proposals provided a template in Annex A of the Call for Proposals that can be used by the Agency. Agencies can use their own termsheets but must add sections on Currency Risk, Co-financing Ratio and Financial Additionality as defined in the template provided in Annex A of the Call for proposals. Termsheets submitted at CEO endorsement stage should include final terms and conditions of the financing.

ANNEX G: (For NGI only) Reflows

Instructions. Please submit a reflows table as provided in Annex B of the NGI Program Call for Proposals and the Trustee excel sheet for reflows (as provided by the Secretariat or the Trustee) in the Document Section of the CEO endorsement. The Agencys is required to quantify any expected financial return/gains/interests earned on non-grant instruments that will be transferred to the GEF Trust Fund as noted in the Guidelines on the Project and Program Cycle Policy. Partner Agencies will be required to comply with the reflows procedures established in their respective Financial Procedures Agreement with the GEF Trustee. Agencies are welcomed to provide assumptions that explain expected financial reflow schedules.

ANNEX H: (For NGI only) Agency Capacity to generate reflows

Instructions. The GEF Agency submitting the CEO endorsement request is required to respond to any questions raised as part of the PIF review process that required clarifications on the Agency Capacity to manage reflows. This Annex seeks to demonstrate Agencies? capacity and eligibility to administer NGI resources as established in the Guidelines on the Project and Program Cycle Policy, GEF/C.52/Inf.06/Rev.01, June 9, 2017 (Annex 5).