

# IKAN Adapt: Strengthening the adaptive capacity, resilience and biodiversity conservation ability of fisheries and aquaculture-dependent livelihoods in Timor-Leste

Edit and Submit CEO Endorsement

## Basic project information

**GEF ID**

10181

**Countries**

Timor Leste

**Project Name**

IKAN Adapt: Strengthening the adaptive capacity, resilience and biodiversity conservation ability of fisheries and aquaculture-dependent livelihoods in Timor-Leste

**Agencies**

FAO

**Date received by PM**

12/9/2020

**Review completed by PM**

**Program Manager**

Fareeha Iqbal

**Focal Area**

Multi Focal Area

**Project Type**

FSP

## **PIF ☐**

### **CEO Endorsement ☐**

**Part I ? Project Information**

**Focal area elements**

**1. Does the project remain aligned with the relevant GEF focal area elements as presented in PIF (as indicated in table A)?**

Secretariat Comment at CEO Endorsement Request

12/22/2020:

Yes.

Agency Response

**Project description summary**

**2. Is the project structure/design appropriate to achieve the expected outcomes and outputs as in Table B and described in the project document?**

Secretariat Comment at CEO Endorsement Request

BD, 5/14/2021:

Not yet.

FADs: While the project makes a good case for FADs in this context, they come with tremendous biodiversity and marine debris issues. The project also states that the return on investment with FADS can be quite quick and thus it does not seem like GEF financing should be necessary. In light of the significant potential downsides to FADs, GEF resources cannot support the implementation of FADs.

Output 1.2: Thank you for focusing on species listed as Critically Endangered on the IUCN Red List.

- o The snake-necked turtle is also listed as a priority as an EDGE species (evolutionarily distinct). While ensuring to hear the voices of and perspectives of stakeholders, it is important to also take decisions based on science. The highlighting of crocodiles, which are disliked for other reasons, as a cause of decline is a case where it will be important to examine scientifically actual evidence. Large predators are often scapegoated. Published information on saltwater crocodiles does not name turtles as a significant food source, and the threats identified for the snake-necked turtle on the IUCN Red List relate to hunting and international trade (though appear to come from expertise on the other subspecies).
- o Are sea turtles hunted? Will the project seek to address this issue?

CCA, 5/14/2021:

Cleared, thank you.

CCA, 12/22/2020:

Further information is requested:

1) Output 2.2: In the main body of the CER, the general categories of proposed investments for the adaptation technologies have been presented in the same level of detail than they had at PIF stage, i.e., there is lack of specificity on proposed investments. Please note that the on-the-ground adaptation elements of LDCF projects are extremely important; these need to not only be identified but elaborated on by CEO Endorsement stage, so that they can be reviewed by GEF Sec for climate change additionality and other key review elements. Please note that as we expect 50-80% of the LDCF grant to support on-the-ground measures to reduce vulnerability to climate change, and as this appears to be the only INV sub-component of the project, this information is important.

2) The proposed LDCF grant supporting Component 2, which includes the on-the-ground adaptation investments (Output 2.2) has been reduced significantly from what was proposed at PIF stage. Please re-allocate so that the LDCF grant supporting this component/Output is at least as much as indicated at PIF stage.

3) Component 3: Please provide further information on the following output: "Formal establishment of the National CC and Biodiversity Network (including operational budget)". For what duration is the operational budget supported by the project? How will this network be sustainably financed in the longer term? Please include risk of disruption to sustainability of its financing in the Risks table.

4) Some of the project sites are coastal and others are not. Please provide information - for example, in a table - on which adaptation actions and investments will be supported at which locations. At present it is not possible to differentiate the various site-specific proposed interventions by location.

5) The ProDoc states that Output 3.1 will support EWS for fishery and aquaculture dependent communities. Can you please provide further information on this?

BD, 1/26/2021:

Overall, it's odd to see project outputs as having activities that "may include" leaving actual activities undecided. While we understand the importance of adaptive management (particularly in the light of COVID), this seems odd.

Aquaculture ? Aquaculture can have devastating impacts on biodiversity in a variety of ways, so it will be especially important to ensure that biodiversity considerations are included in aquaculture plans throughout. We acknowledge that there may be some trade-offs as aquaculture can be important for food security and potentially to relieve pressure on fisheries. However, we find it important to emphasize the need for this project to focus on reducing harm if not doing good for biodiversity.

In addition:

Output 1.1

- Does this include freshwater biodiversity in addition to marine? How will this relate to aquaculture?

- Are these plans going to be developed already as baseline activities or will they be new and additional? If they are new and additional, how will the project make sure that they are actually implemented?

Output 1.2

- Proposed activity 2 seems focused on the local level despite the output being focused on national work. While not objectionable as an idea, the writing is confusing.

- We would expect to see the targeted wetland and species already selected at this point and justification provided. The term "vulnerable" is the lowest level of threat classification in the IUCN Red List, so it's odd to focus on vulnerable species for such an investment of resources. Please revise. (please note that page 35 of the ProDoc states that 1 species plan will be developed)

Output 1.4

- How will the sustainability of these trainings be maintained given high government turn over?

- In general, the biodiversity strategy tries to focus on learning by doing and the application and implementation of capacity and plans that are supported by the project. It is hard to see the relationship of these activities to actual implementation of on-the-ground change.
- One-off trainings ? We have heard criticism of short and one-off type of trainings that are often provided through international assistance that are often disparate and lacking in cohesion to create greater results.

#### Output 1.5

- Should we be supporting NDC reporting here?

#### Outcome 2.1

- The title of this outcome is hard to follow. We would suggest revising this to be simpler. The goals are the conservation of biodiversity and adaptation through these activities, not the reverse.
- What is a ?sensitive? area?

#### Output 2.2

- Biodiversity seems to be rather low on the set of concerns here despite it contributing significant funding. There seems to be an assumption that any proposed activities will be win-win rather than potential trade-offs. FADs for instance can have negative biodiversity consequences. How will these be addressed?
- What is an example of some ?innovative fisheries and aquaculture CCA/BD technology?, specifically related to BD?
- Tilapia and other species can be invasive. Is the project considering these issues?

#### Output 2.3

- What is biodiversity resilience?

#### Output 2.4

- This output and others seem to rely on the assumption that if you give people more information they will change behaviors. Will the project actually support them in the implementation of these plans?
- Will the communities receive support from the government in the monitoring and enforcement?

#### Output 3.1

- It is unclear how the project will allow for NDFA participation in climate change bodies.

#### Output 3.4

- The need for and purpose of a participatory BD monitoring system is not clear for this project. These programs need to be carefully considered so that data is collected well and actually used rather than just being a feel-good activity. Please provide more information on this.
- The resources devoted to this seem high when they could be spent working to mitigate the impacts of climate change on biodiversity rather than monitor it. The BD strategy does not include CC monitoring particularly when there are not resources to respond to these impacts.

## Agency Response

Responses to comments made on 5/14/21

1. FADs Taking into account the recommendation, the reference to FADs has been removed from the ProDoc ? however, we consider important to note that the idea of the use of FADs in the particularly context of Timor-Leste the objective was to move away from reef species to pelagic species that are more sustainable to fish. This was BD and CC positive, and it would have included the adoption of anti-debri approaches that are being used in the Pacific. These FADs are anchored near-shore FADs, (as opposed to floating FADs away from the shore) that are managed with appropriate community-based management measures to address any risks to the environment. Many of these FADs are also being built with inclusion of appropriate eco-tech in terms of biodegradability (for example, in Kiribati, an FAO project is trialling semi-submersible FAD we largely consisting of coconut string, plaited in three, with other coconuts husk ribbons .. FAO has also got guidance on their management ? please see <http://www.fao.org/3/ar482e/ar482e.pdf>

### 2. Related to Output 1.2 comment

1. The below text has been included in the ProDoc: The freshwater Snake neck turtle (*Chelodina mccordi*, sub-species *timerensis*) is also critically endangered, and listed as a priority as an evolutionary distinct (EDGE) species. Their decline is due<sup>[1]</sup> to human harvest<sup>[2]</sup>, predation by dogs and pigs burnings during dry seasons, clearing of agricultural lands, natural predation (crocodiles), deforestation, prolonged periods of drought and related impacts of climate change, and over-harvesting. Lack of knowledge and awareness on the impacts of destructive activities, lack of fishing skills, and lack of law enforcement were identified as the main root/causes behind the destructive activities causing detrimental impacts. Since the information is from 2011.

2. There is anecdotal evidence of the harvesting of turtles (both marine and freshwater), and the poaching of turtle eggs, but specific information addressing this issue is lacking. The assessment done under Output 1.2 will include a review the existing situation and current issues faced by the selected

endangered species, and it will include the snake-necked turtle (freshwater) and other marine turtles.

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[1] <https://www.cbd.int/doc/meetings/mar/cbwsoi-seasi-01/other/cbwsoi-seasi-01-timor-leste-01-en.pdf>

[2] Eisemberg, C.C., Costa, B.G., Guterres, E.C., Reynolds, S.J. and Christian, K.A. 2016. Notes on *Chelodina mccordi timorensis* Biology, Harvest, Current Threats, and Community Perceptions in the Lake Iralalaro Region, Timor-Leste. Chelonian Conservation and Biology, 2016, 15(1): 69-78.

1. - **RESPONSE: Further details have been provided for the Output as follows:**

**Output 2.2** Additional information about the adaptation technologies and practices (with attention also to biodiversity considerations), have been included in the ProDoc as below:

**Output 2.2. Innovative adaptation technologies and practices co-developed with fisheries and aquaculture communities and implemented.**

Adaptation plans, practices and technologies will be developed and implemented with the support of NDFA and partners. The profiling of each community (under the vulnerability assessments done under Output 1.1) will lead to the preparation of CC resilient/CC adapted local fisheries management plans or CCA plans, as appropriate. These plans will integrate biodiversity conservation strategies relevant to the ecosystem (Output 2.2). In aquaculture clusters similar CCA plans will be developed.

Based on these community plans, and agreed allocation of project resources, the project will implement the priority activities for each. These plans will be developed in the context of results of CC vulnerability assessments, considering also principals of equity with budget allocations. The project will assist each target community to prepare, for example, an immediate adaptation plan to be financed by the project and a longer-term adaptation plan to be financed by co-financing partners. Close communications will be maintained with co-financing partners and collaborating projects to inform the results of the profiles and CC adaptive plans to explore potential areas for additional funding. Communities that have sensitive habitats such as mangrove forests, wetlands, reefs (and/or crocodile habitat where there is risk from attacks on fishers and gleaners) will have additional support to carry out some key CC adaptation activities identified in the management plans.

While interventions will be decided through participatory processes, plausible interventions in each district are highlighted in Table 1 and described in additional detail below:

Table 1. Interventions possible as component of activity 2.2 in the seven focal districts. Activities implemented will be selected through plan co-developed with communities.

	1. Fishing methods	2. Safety	3. Co-management	4. Post-harvest	5. Infrastructure	6. Skills development	7. Climate-smart infrastructure	8. Integrated aquaculture/agriculture
District								
	Capture Fisheries							
Oecusse		P	P	P	P	P		
Cova Lima	P	P	P	P	P	P		P
Bobonaro		P	P	P	P	P	P	P
Dili	P	P	P	P	P	P	P	
Aileu						P	P	P
Viqueque	P	P	P	P	P	P	P	P
Lautem		P	P	P	P	P	P	P

## A) Capture Fisheries Adaptations and Innovations

### 1) Innovations in fishing methods and fishing grounds

**Climate change adaptation benefits:** Reduces vulnerability of fishing livelihoods by reducing reliance on reef areas likely to be increasingly impacted by temperature stress, terrestrial runoff and increased storm severity.

**Biodiversity/ Natural Resources benefits:** Fishing pressure reduced on reef areas. Effort shifted from vulnerable sedentary, slow growing reef species, to robust small-pelagic species with high reproductive rates



Fishing is constrained seasonally and geographically in Timor-Leste by the very small scale of fishing fleets, and the limited range of fishing gears employed by fishers. This creates a cycle that sees fish as a seasonal, low volume, and (relatively) high value commodity for most households in Timor-Leste. While from a conservation perspective this may seem optimal, reality is that fishing pressure is in many contexts focused on vulnerable areas and resident, slow growing species. In particular, the narrow fringing reefs near population centers are highly vulnerable. While in past years, the lack of fisheries monitoring rendered risky any efforts to diversify fishing, the recent development of vessel and catch monitoring capacities through the PeskaAS system provide the tools to monitor new fisheries, and their impacts on stock levels. The project will in particular work with communities on further scaling past research[1] on the use of nearshore anchored fish aggregating devices (FADs) to shift effort away from reefs, on accessing deeper water stocks (see associated component on sea safety) such as the substantial south coast snapper resource, targeted in recent years by international fleets with few or no benefits flowing back to Timor-Leste. This aligns directly with a key principal of the National Fisheries Strategy ? all fish stocks that can be fished by Timorese fleets should be reserved for Timorese fleets?.

The Fisheries Sector Support Program has conducted extended research into the utility of anchored nearshore FADs to sustainably increase fish supply in Timor-Leste. A FAD appropriate to the steep bathymetry/high current context of Timor-Leste has been extensively trialed (Tilley et al., 2019). Returns on FAD deployment varied considerably between trial communities, however time to return on investment (ca. US\$1200) was as short as 18 days at one site. FADs provide an alternative fishing location to the extensively fished reef areas of Timor-Leste, and shift fishing pressure away from typically slow-growing, resident reef species, to fast-growing, highly nutritious small pelagic species. In anchored FAD trials in four dispersed communities in Timor-Leste, catches were dominated (96% of total catch) by three ?species? ? the mackerel scad, the short-bodied scad, and sardines (sardines possibly representing a complex of up to five species). The diversity of catches from FADs was less than half the diversity of a typical reef catch, meaning FAD fishing in this context is highly selective. FADs in Timor-Leste do not attract substantial numbers of juvenile tuna or sharks ? an issue seen in other jurisdictions. Catch rates at FADs (kg of fish per fisher per hour) averaged almost 3 times that of open water fishing activities targeting similar small pelagic species. While monitoring and management is still key to sustainability, these short-lived, highly fecund species are typically much more robust to fishing than are reef fish. The IkanAdapt project will base approaches to developing FAD systems with communities on this research, but will also link to, and continue to build on, FAD system progress in the Pacific. Notably, recent work has addressed issues relating to marine debris produced by failed FADs, moving towards biodegradable materials[2].

## **2) Introduction of safer vessel design, and training in sea safety**

<b>CCA benefits:</b> Improved safety in the face of likely increased severity of climatic events.	<b>BD/ NRM benefits:</b> Enables safe fishing beyond inshore reefs, and adoption of new fishing methods, reducing pressure on vulnerable habitats and species.
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In association with innovations in fishing gears, and in alignment with project climate-change induced seasonal changes in weather patterns, contextually appropriate, co-developed, affordable improvements to safety protocols and vessel design will be promoted. Co-development processes will involve working directly with communities to catalog the most common and most damaging types of fishing accidents. This data will form the basis of a national fishing accidents database, to be appended to the PeskAAS system. This work will link directly with the early warning system development, and the interaction between recorded accidents and forecast meteorological change will form the basis of interventions. Responses will build directly on work by both FAO and the SPC in similar fisheries in the Pacific and globally, and by the FAO-led Regional Fisheries Livelihoods Program in Timor-Leste<sup>[3]</sup>.

### 3) Improved climate-responsive co-management systems

<b>CCA Benefits:</b> Climate awareness and responsiveness built into fisheries management systems, enabling adaptation. Effective co-management communication provides pathways for climate change communication with fishers and their communities.	<b>BD/ NRM benefits:</b> Effective management directly engaging with communities provides for 2-way communication relating to concerns and experience of biodiversity change. Provides an effective mechanism for species protection at local levels
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Fishery management in Timor-Leste has largely been traditional in nature, and informal. Formal management has impacted on past international fisheries conducted in Timorese waters (none currently licensed), but has had low levels of influence at the community level. This is due to the very small-scale nature of community fisheries, their widespread distribution, and a lack of attention paid to fisheries in national budgets. As pressure on fisheries increases, both through a rapidly increasing national population, through the likelihood of future enterprise development, and through climate change, active ecosystem-based collaborative management of small-scale fisheries is becoming a growing priority for both government and communities. The small areas of coastal reef in Timor-Leste risk becoming over exploited if controls and management capability are not improved, and diversified livelihoods for coastal communities not supported. Areas of reef near to populations are showing clear signs of heavy fishing pressure. While co-management is supported in policy, implementation has been scattered and variable in effectiveness<sup>[4]</sup>. The IkanAdapt project provides a timely opportunity to invest in

institutionalizing ecosystem-based approaches to co-management, and ensuring legitimate participatory engagements to understand and assess trade-offs between food production, culture and biodiversity conservation. The project will work alongside existing initiatives in the co-management space (e.g. the WorldFish-led Fisheries Sector Support Program, the USAID Tourism for All project ? focused on Atauro Island) and key agencies working in this space (Coral Triangle Centre, Conservation International), to build capacity to fill current knowledge and institutional gaps required as preconditions for effective management.

Recent government processes of decentralization provide both concerns and opportunities for institutionalizing co-management. Intermediate institutions, necessary between community and national levels, will be formed under the new district structures. The project will work on climate integration and biodiversity conservation at all levels, but will focus capacity building efforts on this ?new middle?. Given strong co-financing through WorldFish and MAF for the development of co-management systems, the project will focus directly on the integration of climate change resilience approaches into management ? an area not currently at the forefront of co-management design.

#### 4) Improved post-harvest and marketing technologies

<b>CCA Benefits:</b> Ensures optimal livelihood and nutrition benefit from existing resources, and new species accessed through diversified fishing.	<b>BD/ NRM benefits:</b> Diversified livelihoods can spread ecological risk across diverse species and systems or system components.
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The nutrition benefits from fish are currently largely experienced by those in or adjacent to fishing communities, or those adjacent to Dili. Dried fish is traded inland, although research has shown that most of this dried fish consumed is of Indonesian origin. A feature of Timorese fisheries is also seasonality ? an excess of fish in the high season contrasts with zero fish availability in the rough season. With improved sustainable production capacity, opportunities for a broader distribution of nutrition benefits must be matched with improved post-harvest handling and value chains. WorldFish has worked extensively with women?s groups to develop livelihood options based around small pelagic fish resources. Examples include:

- ? fish powder (<https://worldfish.exposure.co/ingredients-for-success>) ? providing livelihoods, improved hygienic processing, and improved nutrition outcomes for children, solar fish drying tents
- ? Solar drying tents ? enabling women to dry fish in conditions that would normally lead to poor quality or spoiled dried fish, and improving marketing option. This is important in the context of increasing unpredictability of wet season impacts.

? Fish restaurants/stalls ? providing good returns for cooperatives, and improving fish availability in communities.

? The project will work directly with communities to assess community-driven options for building sustainable fish-based livelihoods through improved handling and value chain system.

All value-chain improvement and post-handling work will be done within a framework for biodiversity conservation, climate resilience and improved nutrition outcomes. On the north coast, this is likely to revolve around small pelagic species. On the south coast, snapper fisheries may be included in the program.

## 5) Development of climate resilient fishery landing areas and infrastructure

<b>CCA Benefits:</b> Infrastructure investments will support livelihood activities developed with communities within a climate resilience framework	<b>BD/ NRM benefits:</b> Ensuring optimal benefit from exploited natural resources is vital if ecosystem components are to be protected for biodiversity conservation
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The micro-scale of the vast majority of coastal fishing in Timor-Leste means that fish are in most communities landed on beaches, adjacent to the homes of fishers, and traded from homes or nearby. The project will work directly with communities to learn from variable success in the past of donor or government projects with landing site investments, and ensure project activities are in line with aspirations and needs. This work will therefore link directly with the value chain and livelihood development endeavours, to ensure investments have a common purpose, and operate within the overarching framework of improving resilience and incorporating biodiversity conservation and knowledge of potential trade-offs. Interventions could include simple processing facilities, marketing areas, ice production etc, and in a limited number of locations, possible landing infrastructure and boat storage. The team will work with communities to ensure appropriate investments that align with the aspirations of diverse groups including women and youth.

## 6) Skills development for fishers, women, youth

<b>CCA Benefits:</b> Training will link directly to, and thereby support, new areas of endeavor such as diversified livelihoods, cooperative formation developed within a climate-change resilience framework	<b>BD/ NRM benefits:</b> Ensuring optimal benefit from exploited natural resources is vital if ecosystem components are to be protected for biodiversity conservation
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Links to national training partners and international agencies working in the fisheries space provide the opportunity for skills development in a range of areas relevant to project activities. These include in supporting services for sustainable fisheries (boat building, repair, engine maintenance), finance skills to facilitate enterprise development (including finance access) and group/co-operative formation, and resource management/conservation. Programs of skills development must be developed with communities, paying particular attention to principals of ?doing no harm? - skills

development provided without this context risks undermining local enterprise and innovation. Priority areas for development will be developed in year 1, and comprehensive locally contextualised courses either facilitated with local partners, or developed where no local options exist.

## B) Aquaculture adaptations and innovations

### 7) Climate-smart farming infrastructure and technological adaptations

<b>CCA Benefits:</b> Improved production system resilience in the face of projected climate shifts.	<b>BD/ NRM benefits:</b> Resilient livelihood and food production systems help to constrain ecosystem pressure to a limited set of resources.
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Globally, aquaculture is the fastest growing food production sector. In Timor-Leste, where low supply of affordable animal-source foods is a key driver of nutrition insecurity and widespread childhood stunting, even in small amounts, fish and other aquatic foods in diets can be transformative. Inland aquaculture is set to grow rapidly, with donor funding supporting the development of capacity and infrastructure to see major expansions of tilapia farming in the next five years. Seaweed farming also has substantial potential for growth. With both sectors primed for rapid growth, locally adapted climate-smart systems that keep biodiversity benefits/costs and tradeoffs central, will be both timely and impactful. The IkanAdapt project will integrate directly with teams involved in leading donor programs, and with government on policy, to develop and promote these approaches.

Adaptations will be co-developed with farmers (and hatchery owners, for inland culture). Recent climatic shocks (floods in 2020, 2021; El Nino-induced drought in 2016; increased ocean temperatures in 2018/19) have provided empirical experience that, together with international experience and research, will provide the experiential basis for developing adaptation strategies. Farming system adaptations may include physical adaptation to farming infrastructure (e.g. higher bund walls to protect from flooding and increase water storage), optimised macro- (landscape) and micro- (farm) scale selection of new sites through improved suitability mapping, diversified species selection (see below), improved technological solutions to maintaining optimal culture conditions during shocks (e.g. solar aerators, locally sourced optimized emergency feeds) etc.

### 8) Integrated agriculture/aquaculture farming systems (IAA)

<b>CCA Benefits:</b> Diverse culture systems provide resilience to diverse shocks, maintaining livelihoods and food systems when conditions are unpredictable and changing.	<b>BD/ NRM benefits:</b> Benefits of moving away from monoculture include reduced disease risk, and diluted pressure on a more diverse set of ecosystem services
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Integrated agriculture/aquaculture is a nature-based approach that sees fish grown with other aquatic or terrestrial animal and plant species in a way that benefits biodiversity,

access to diverse foods (to build nutrition security) and system productivity. The approach optimizes the use of on-farm resources including land, water, nutrients and sunlight. The approach is extensive, or semi-intensive and appropriate to household and small-scale enterprises. IAA as a multi-trophic system has good potential to increase dietary diversity of rural households and communities in Timor-Leste. As examples, IAA could involve the use of livestock or poultry producing manure that is in turn used to fertilize ponds to support green-water tilapia farming. Crops grown on the bund of the pond, or irrigated from pond water, then receive additional nutrient benefits from nutrient enrichment of the water. IAA can reduce disease concerns associated with monoculture systems. In some circumstances (perhaps infrequently in Timor-Leste due to soil types) fishponds can double as water storage. Fish can be grown in crop irrigations systems such as in rice-fish farming. Rice/fish culture systems, highly successful in a number of Asian countries in increasing diversity in production systems<sup>[5]</sup>, and conferring climate resilience, will be investigated and potentially piloted in 1 ? 2 districts. Approaches to IAA must be developed in context, considering local bio-physical conditions, biodiversity impacts, farming practices and traditions, food environments and cultural norms. The innovations here will be in co-developing locally contextualised systems with farmers, the private sector and government.

#### 9) Nearshore habitat-integrated mariculture ? seaweeds and mangrove oysters

<p><b>CCA Benefits:</b> Provide viable supplemental and alternative livelihoods to reduce pressure on fisheries resources</p>	<p><b>BD/ NRM Benefits:</b> Carbon positive culture systems. Habitat-integrated culture systems with minimal to positive impacts on ecosystems. Income generation provides an incentive for habitat protection.</p>
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Globally, marine finfish culture continues to expand rapidly, but largely serves the high-end market in developed economies and financial barriers to entry are often insurmountable for small enterprises in less developed economies. Seaweeds, and potentially mangrove oysters, not only offer low-investment alternatives that are accessible to rural households, but also offer carbon positive culture systems. Seaweeds are unique in their success as a supplemental livelihood for fishing households<sup>[6]</sup>, with a very good cultural fit for fishing households. Women are able to integrate many associated activities with existing livelihood and domestic commitments. Seaweed farming on Atauro Island provides a supplemental livelihood, but there is substantial potential to build a more resilient industry. Larger scale and highly productive systems in West Timor provide excellent opportunities for learning, and at least in the short term provide access to international markets. Early scoping suggests current culture systems are limited by supply of propagules, diversified markets, and limited business skills among industry participants. Opportunities for small-scale processing and marketing of food and cosmetic products have been piloted and show potential. The project will work

across these barriers to promote and facilitate seaweed livelihood development in appropriate ecotypes.

Other opportunities for ecosystem integrated near-shore culture systems, such as mangrove oysters, will be investigated and where appropriate (particularly considering safety regarding crocodiles) piloted with communities.

#### 10) Diversifying culture species

<b>CCA Benefits:</b> Species selection will be based on resilience to projected conditions under likely climate change scenarios, ensuring resilient food systems and livelihoods.	<b>BD/ NRM Benefits:</b> Moving away from monoculture reduces disease risk. Productive mangrove systems and inshore areas will see their value appreciated by communities, increasing incentives for conservation.
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Seaweed species diversification: During a recent scoping mission to Atauro Island by WorldFish, MAF and a regional seaweed consultant, seaweed farmers conveyed substantial issues with obtaining propagules, and disease relating to water temperature. A very limited number of cultivars are currently used, and learning from West Timorese experience, there is scope for diversifying culture systems that can cope with, or thrive in, diverse conditions.

Indigenous fish species: Indigenous small fish species grown in freshwater aquaculture systems have had transformative impacts on nutrition security in parts of the world[7]. Diversifying production systems, particularly with indigenous species, provides a range of benefits including providing low-value fish, more likely to be consumed directly by farming households, reducing disease risk associated with monoculture systems, and improving biodiversity benefits from culture systems. This component will start with a stock take of local freshwater species, and desk-based investigation of plausibility of culture. It will progress to piloting if appropriate species can be identified.

### C) Aquatic Ecosystems

#### 11) Local Marine Management Areas (LMMA)/Marine Protected Areas (MPA) development

<b>CCA Benefits:</b> Effective local management provides the necessary feedback systems to detect change, communicate issues and needs, and ultimately to support adaptation.	<b>BD/ NRM Benefits:</b> Promotes effective and community-driven local management of biodiversity resources.
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The project will work with a smaller number of communities (at least 6), alongside government, to develop and implement LMMA and MPA plans. Scaling the positive outcomes from recent pilots, notably including the integration of ?tara bandu? ? a



traditional approach to natural resources management ? into LMMA development where appropriate, will be a focus of project activities. Existing LMMA areas on Atauro Island have followed a model whereby resource use and protection rules developed and agreed at the community level are formally approved at district level, giving legal status to these agreements, while allowing for periodic review and adaptive management. The project will work with these communities initially to review positive and negative outcomes from this model, functioning of the review and adaptive management approaches, and with MAF staff, we will optimise and institutionalize a model for scaling. We will work with MAF to develop a set of standards for implementation of LMMAs as an approach to ensure genuine co-leadership by communities, and consultation with diverse, disadvantaged and marginalized groups as part of all LMMA and marine protected area work by NGOs and government agencies.

## 12) Restoration and mitigation in key ecosystems

<p><b>CCA Benefits:</b> Ensures both provisioning and regulating ecosystem services from coastal habitats are intact, improving resilience of ecosystems and coastal communities to climate change.</p> <p>Supports livelihoods dependent on ecosystem services from vulnerable systems.</p>	<p><b>BD/ NRM Benefits:</b> Improves resilience to climate change of key areas for biodiversity conservation.</p>
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For communities reliant on, and adjacent to, vulnerable or degraded habitats, we will work with local stakeholders, service providers, and youth groups on options for mitigating damage and restoring ecosystem function. This will integrate closely with (11) above. Scoping will include integrating local knowledge and scientific research on habitats and species, and will build on, and scale out, outputs and outcomes from recent projects and national activities focused on coastal system resilience (notably the GEF funded *Building Shoreline Resilience of Timor-Leste to Protect Local Communities and their Livelihoods* project implemented by UNDP). Activities highlighted during early scoping by communities include reducing plastic pollution in lagoon areas, replanting of mangroves to improve coastal protection and provide habitats for fish and terrestrial species, mitigation of local human-induced stressors on ecosystems, and environmental awareness raising activities. Opportunities for carbon sequestration will also be investigated, particularly in association with mangrove restoration and seagrasses.

## 13) Improved spatial management of nearshore habitats

<p><b>CCA Benefits:</b> A climate vulnerability ?layer? included in models will aid the development of spatial management approaches that integrate climate projections.</p>	<p><b>BD/ NRM benefits:</b> Provides the tools to include vulnerable ecosystems and species in approaches to coastal management and zonation</p>
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Tools are increasingly available for biodiversity conservation planning and spatial management in the coastal zone. The project will build on recent comprehensive coastal habitat mapping undertaken by NOAA's *Coral Reef Ecosystems Program*, to develop



an aquaculture suitability spatial model/map using *recommendation domains* GIS-based modelling approaches (WorldFish has completed a matched exercise for inland aquaculture suitability). An innovation will be in including spatial layers on biodiversity and climate change vulnerability in this model. As Timor-Leste is currently developing a new legal basis for aquaculture management, this output will not only guide project interventions, but also have impact at the national planning level. It will be pre-adapted for incorporation into a broader coastal zone spatial planning exercise.

#### 14) Alternative livelihoods

<b>CCA Benefits:</b> Diversifies livelihoods, reducing reliance on climate-vulnerable resources and building resilience to diverse shocks.	<b>BD/ NRM benefits:</b> Bundled as part of a package with improved management, can provide equitable and just pathways to reduced exploitation of natural resources and ecosystems.
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Coastal and riparian environments create opportunities for livelihoods not directly associated with fisheries and aquaculture. Productive supplemental livelihoods can provide a strong household resilience factor in rural communities. Where these livelihoods provide income to natural resource-dependent households, they can be part of a package that acts to reduce exploitation pressure on vulnerable ecosystems and natural resources. In the right location, productive assets associated with fish-based livelihoods can contribute to development of supplemental and alternative income sources. Examples include the tourism sector, where boat transport, snorkel charters, home stays may be viable alternatives. The livelihood integration of agriculture and fishing in Timor-Leste is exceptionally strong<sup>[8]</sup>, and when agriculture failures occur due to increasingly unpredictable wet seasons, gardens may be abandoned and pressure increases on fisheries as a remaining viable livelihood. As a component of community resilience planning, the project will provide opportunity for the development or strengthening of alternate non-extractive alternative and supplemental livelihoods.

2. Budget has been reworked and is now in line with original budget allocation. The final budget for each component is:

1. - Component 1 ? 566,838 USD (14,3 % of the project implementation costs)
2. - Component 2 ? 2,517,770 USD (65,5 % of the project implementation costs)
3. - Component 3 ? 466,090 (11,8 % of the project implementation costs)
4. - M&E ? 227,215 (5.7 % of the project implementation costs)
5. - PMC ? 188,297 (4,7 % of the project implementation costs)

3. This output has been modified to: **Output 1.5. Biodiversity and Climate Change Network strengthened through support from NDFA and sector on issues related to fisheries and aquaculture**, and the work will be focused on formalizing and institutionalizing the role and functions of a **Biodiversity and Climate Change Network**. The aim is that the network will be formally established in a national institution with the ability to support the network such as a university. The operational budget is expected to be very low, just maintaining the meetings, which will be initially covered by the project. The project will also provide support for writing up the Terms of Reference for the operation and technical work of the Network, as well as provide initial assistance for writing research grants, and accessing other forms of financial resources. This will ensure the sustainability of the Network well beyond the lifetime of the project. Ultimately, the Network will serve as a clearing house for climate activities. This information has also been integrated into the Risk table as suggested.

4. Kindly refer to the response to Question 1 above.

5. - **RESPONSE:** Fish and fish-farmers require high-quality climate information and targeted forecast that directly address their sectors, particularly those that can help predict changes in water temperature (such as increases that can lead to levels beyond the physiological tolerance of some species, or sudden temperature fluctuations), erratic or intense rainfall or wind events, or floods and droughts. Activities related to Early Warning Systems will build on the findings and recommendations of a previous study conducted by the WorldFish in Bangladesh, that developed a decision support framework to help small-scale fish farmers to better manage climate risks. This was done first through the identification of climate sensitive aquaculture operations (based on the response of farmers and key informants, and literature review), and the identification of temperature and rainfall thresholds of key aquaculture species. The study also took into consideration social perceptions as a key element for developing resilience of aquaculture systems, which highlighted the need for capacity development of fish farmers, along with raising awareness on weather impacts on aquatic systems. The work done by WorldFish in Bangladesh provided a good example for the use of Climate Information Systems (CIS) for small aquaculture farmers, and highlighted the need to provide clear actionable information in response to forecasted local climate conditions, with the aim of managing climate risks and ensuring livelihoods as well as food and nutrition security.

- The EWS will integrate multiple data sources to provide long and short-term indicators of environmental conditions, in numeric or graphic formats co-developed with fishers and key stakeholders. The system will integrate multiple data sources including available remote sensed and down-scaled modelled data, and locally gathered real-time data. Consultation on formats, data needs and communication will be with both men and women in communities, as needs are dependent on livelihood structures

and priorities. We will work with a least one local private enterprise currently providing climate and remote sensing data to farmers, with possibilities of expanding private services, or integrating data collected through this system into a government-supported EWS. Depending on funding outcome, the project will work closely with an FAO led project (?Enhancing Early Warning Systems to build greater resilience to hydro-meteorological hazards in Timor-Leste?) currently under development, in the areas of EWS delivery, capacity building and improved monitoring/forecasting systems.

- There is clearly opportunity to integrate the EWS with the existing national fisheries data system (PeskaAS) developed by WorldFish, MAF and collaborators. A current focus with the PeskaAS system is improving the ?fisher facing? elements, providing communication channels back to communities and fishers. There are many global examples where smartphone apps have been used for such communication, and these systems can be adopted. However, smartphone penetration in rural Timor-Leste is still very limited. Providing local solutions that integrate with expanded communication systems that will be implemented to support co-management communication provides an alternative pathway for information, and ensures information flows are bi-directional.
- Activities related to EWS would take into consideration the lessons and perspectives from other countries and stakeholders, particularly on gender aspects to be included in the system, as environmental impacts often affect men and women in different ways.[1]

On comments from BD expert:

6. On text relating to "may be", text has been amended to show what the project will be doing.

7. Output 1.1 related query: - **RESPONSE:** We have added [(marine and freshwater)] in the output 1.1, and now reads: *Climate induced risks mapped, vulnerabilities and aquatic biodiversity status assessed for the fisheries and aquaculture sub-sectors (marine and freshwater)*. As indicated in the Biodiversity section, the project will ensure that biodiversity considerations are included in aquaculture plans throughout the implementation of the project. The project will build on existing coastal habitat mapping completed as a component of the NOAA-led Interdisciplinary Baseline Ecosystem Assessment Surveys to Inform Ecosystem-Based Management Planning in Timor-Leste project to develop aquaculture suitability maps and models for coastal areas. These models (using a recommendation domains approach) will include GIS layers on biodiversity and climate change vulnerability as part of the decision tool. The project will append biodiversity and climate change vulnerability layers to the inland aquaculture suitability model developed by WorldFish in 2011 as a component of National Aquaculture Strategy.

- The guidelines for aquaculture will include both marine and freshwater environments. For marine aquaculture, the project will support enhancing the production of seaweed farming, with the direct involvement of women, and linking with the seaweed processing plant in Kupang (Indonesia). The project will investigate options for mangrove friendly habitat-integrated culture, notably for mangrove oysters. For freshwater, the focus will be on building the climate change resilience of tilapia farming systems. We recognize the environmental trade-offs associated with tilapia farming. There is substantial donor support for the sector as a supply of micronutrients to rural households, and is set for rapid expansion over the next 5 years. The environmental risk in Timor-Leste is relatively low relative to many locations. Mozambique tilapia have been present in Timor-Leste inland waters for decades, and most rivers in Timor-Leste are ephemeral, and will not support tilapia populations. Tilapia are farmed in constructed ponds, not rivers (although escapement risks remain). The Genetically Improved Farmed Tilapia (GIFT) strain are produced as monosex (male) from the hatchery, reducing environmental risk. The project will work with tilapia farmers on climate-proofing culture systems, improving livelihood resilience, reducing escapement risk, and broader approaches to minimizing negative environmental outcomes. In addition, the project will investigate the possibility of farming small indigenous species, which are currently undervalued, but have an important cultural and food security value. Other opportunities for farming system diversification, rice-fish farming will be investigated as a component of resilience planning.

- After discussion with the country specialists, the activity has been modified to the development of 'Guidelines on how to integrate Climate Change adaptation and Biodiversity conservation into Municipal Development Plans'. The idea behind this stems from current Decentralization process where the District, now Municipalities are 'empowered' to generate Municipal level development plans. The project will provide guidance on how to integrate biodiversity and climate change into existing Municipal level development plans. This will be linked with the NAP and NAPA ongoing processes in Timor-Leste.

On Output 1.2- **RESPONSE:** Thank you for noting this ? the output has been modified to indicate the municipal level reach as well: Output 1.2 ? Climate adaptation and biodiversity conservation integrated into national *and municipal* strategies, incorporating fisheries and aquaculture needs. Information has been provided about critically endangered species.

- The project will work with communities, government (MAF and Ministry of Environment), local NGOs and international NGOs towards protection plans and actions for a number of critically endangered species. Stakeholder consultations for the project highlighted 3 species in particular, and a fourth of concern.

- the Snake neck turtle (*Chelodina mccordi*, sub-species *timorensis*) is critically endangered<sup>[1]</sup>, and resident in the Lake Irilalaru area, Lautem

district[2]. Stakeholders suggested in consultation meetings that dramatic increases in crocodile numbers may be responsible for the species decline.

- the ricefish (*Oryzias timorensis*) is known from riverine systems in mid-Timor (both Timor-Leste and West Timor). It is critically endangered[3], and has not been found in recent surveys, however locals reported knowing of the fish during community consultations. The ricefish family may have potential as small indigenous fish for culture, to be investigated as a component of project output 2.2.
- In marine systems, the Hawksbill turtle (*Eretmochelys imbricata*) is critically endangered[4] and conservation planning and actions for the species will be undertaken within the framework of MPAs and LMMAs developed or enhanced through project actions. Project actions will build on successes nationally through community actions and NGO activities.
- During stakeholder consultations, resident populations of the hammerhead shark (*Sphyrna lewini* ? critically endangered[5]) were raised as a potential project focal species. This species will be considered within the broader framework of protected area status for Atauro Island, and project actions will at a minimum raise awareness of this species within such a framework. Broader engagement in species protection will be challenging.

On Output 1.4: o **RESPONSE:** Capacity development will be guided by FAO's corporate approach emphasizing that capacities at the individual, organization, and enabling environment are interlinked. Thus, "[c]apacity development often involves enhancing the knowledge and skills of individuals, whose work results greatly rely on the performance of the organizations in which they work. The effectiveness of organizations is influenced by the enabling environment. Conversely, the environment is affected by organizations and the relationships between them." [1] The FAO corporate approach on capacity development also gives importance to strengthening technical and functional capacities, such as formulating and implementing policies and leading reform and leading change; generating, managing and exchanging information and knowledge; engaging in networks, alliances and partnerships; and implementing programmes and projects, from planning to monitoring and evaluation.

Training as one aspect of capacity development will be linked with activities on the ground, such as the strengthening of co-management committees and fish farmer clusters. The training on ecosystem approach to fisheries management and ecosystem-based adaptation will be linked to and will strengthen the implementation and use of PeskAAS[2] for decision-making, which is a near real-time monitoring of small-scale fisheries in Timor-Leste. The project will also work with the Biodiversity and Climate Change Network to develop training modules that can be delivered beyond the lifetime of the project.

The high turnover of government officers usually happens at the higher level; in case they move to another office or agency, the capacity stays within the country and is not lost. Many of the fisheries officers at the sub-national level have been in their jobs for a long time. The capacity of sub-national officers on EAFM and EbA needs to be strengthened in order for them to facilitate capacity development of men and women in

the communities who will be engaged in the development and implementation of management plans.

FAO as the implementing agency, and WorldFish as the executing agency for the project, have a strong presence in country. WorldFish is hosted by the Government of Timor-Leste, has a long-standing relationship with the government, and has developed and implemented successful projects with them.

On Output 1.5 - **RESPONSE:** The aim here is to ensure that the fisheries and aquaculture sectors are being taken into account in the climate change discussions. Part of this effort will be to provide data for the reporting under the adaptation component of the NDC, and the NAP process. The activity has been modified as below:

- o Facilitate the participation of fisheries and aquaculture stakeholders to the National Adaptation Plan process for Timor-Leste, as well as providing data to contribute to the National Determined Contributions related reporting on adaptation.

On Output 2.1 **RESPONSE:** We have revised the title to ?Outcome 2.1. Fisheries and aquaculture dependent communities adapt to climate change and conserve biodiversity through innovative practices and technologies

On Output 2.2: - **RESPONSE:** The Fisheries Sector Support Program has conducted extended research into the utility of anchored nearshore FADs to sustainably increase fish supply in Timor-Leste. A FAD appropriate to the steep bathymetry/high current context of Timor-Leste has been extensively trialled (Tilley et al., 2019). Returns on FAD deployment varied considerably between trial communities, however time to return on investment (ca. US\$1200) was as short as 18 days at one site. FADs provide an alternative fishing location to the extensively fished reef areas of Timor-Leste, and shift fishing pressure away from typically slow-growing, resident reef species, to fast-growing, highly nutritious small pelagic species. In anchored FAD trials in four dispersed communities in Timor-Leste, catches were dominated (96% of total catch) by three ?species? ? the mackerel scad, the short-bodied scad, and sardines (sardines possibly representing a complex of up to five species). The diversity of catches from FADs was less than half the diversity of a typical reef catch, meaning FAD fishing in this context is highly selective. Catch rates at FADs (kg of fish per fisher per hour) averaged almost 3 times that of open water fishing activities targeting similar species. While monitoring and management is still key to sustainability, these short-lived, highly fecund species are typically much more robust to fishing than are reef fish. The IkanAdapt project will base approaches to developing FAD systems with communities on this research, but will also link to, and continue to build on, FAD system progress in the Pacific. Notably, recent work has addressed issues relating to marine debris produced by failed FADs, moving towards biodegradable materials (Sokimi et al.,

2020). Recognizing the environmental trade-offs associated with tilapia farming, although as noted above, the risks are lower in Timor-Leste than in many other countries. Given the substantial donor support for the sector as a supply of micronutrients to rural households, the project will work with farmers and policy makers on reducing environmental footprints as a component of increasing climate resilience. In the revised ProDoc, we have now highlighted the biodiversity and climate change aspects of each of the innovations/interventions listed under output 2.2.

On Output 2.3: - **RESPONSE:** The term has been revised to 'adaptation and biodiversity conservation', which better expresses what the project is trying to do.

On output 2.4: - **RESPONSE:** The project will take into account the **6 levers of behavior change**[1] when designing activities aimed at changing behavior. These levers include the i) provision of material incentives, ii) the use of rules and regulations, and iii) the provision of information on the desired behavior and why it is important. In addition to these, the project will also take into consideration iv) choice architecture, through a better understanding of the underlying decision-making process, as well as v) emotional appeals, and vi) social influences. The project will provide support for the development and implementation of those plans. With regards to enforcement, the communities will continue to receive government support in monitoring and enforcement through the PeskaAAS catch monitoring system. Enforcement will be done through the co-management approach, and the national plan on co-management, which will be applied for marine fisheries. Inland fisheries it is very seasonal and subsistence only, without current enforcement; the focus will be to improve management and data gathering. The project will also focus on institutional strengthening as well, since institutions need support to better address these issues.

On 3.1: **RESPONSE:** At the moment, there is no capacity within NDFA to contribute to the climate change discussions. The focus of the project will be to enhance the capacity of the department to productively contribute to such discussions. This will be done through the Biodiversity and Climate Change Network, to promote the integration of fisheries and aquaculture issues into the Climate change discussion, which is currently focused on Agriculture only.

On 3.4: - **RESPONSE:** There are opportunities in Timor-Leste to efficiently incorporate participatory biodiversity monitoring in partnership with a range of groups. Post-COVID, partnership with dive tourism and 'voluntourism' organizations provides opportunities for citizen science and 'visitor-science' approaches to collecting basic biodiversity information. Standardized protocols including ReefCheck, Seagrasswatch and Coral Watch are already in operation with a number of groups in Timor-Leste, and provide an existing framework for reporting. Current research being undertaken by WorldFish country partners is investigating opportunities for women gleaners to be engaged in participatory monitoring without substantially increasing labour burdens. The project will provide additional training where necessary to these groups, and will develop centralized platform for data collection, linked to the PeskaAAS fishery monitoring system. This activity will directly support MPA/LMMA implementation

under output 2.2, and can potentially be implemented on a wider scale covering important fishing grounds. Ultimately, these data can be linked with the NOAA-initiated dataset on coastal habitats, to compare trajectories to baselines. Additionally, the project will append a *threatened species* data page to PeskAAS, and will provide training and resources for PeskAAS data collectors to identify and monitor catches of, and interactions with, vulnerable species.

- As suggested, the resources under monitoring (Component 3) have been reduced, and increased under component 2.

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[1] Metternicht, G., Carr, E., Stafford Smith, M. 2020. Why behavior change matters to the GEF and what to do about it. A STAP Advisory Document. Scientific and Technical Advisory Panel to the Global Environment Facility. Washington, D.C.

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[1] <http://www.fao.org/capacity-development/our-vision/en/>

[2] See <http://www.fao.org/3/cb2030en/CB2030EN.pdf>

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[1] <https://www.iucnredlist.org/species/123814489/123814575>

[2] Eisemberg, C. C., Costa, B. G., Guterres, E. C., Reynolds, S. J., & Christian, K. A. (2016). Notes on *Chelodina mccordi timorensis* Biology, Harvest, Current Threats, and Community Perceptions in the Lake Iralalaro Region, Timor-Leste. *Chelonian Conservation and Biology*, 15(1), 69-78.

[3] <https://www.iucnredlist.org/species/90980848/90980856#conservation-actions>

[4] <https://www.iucnredlist.org/species/8005/12881238>

[5] <https://www.iucnredlist.org/species/39385/2918526>

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[1] FAO. 2017. Developing an Environmental Monitoring System to Strengthen Fisheries and Aquaculture Resilience and Improve Early Warning in the Lower Mekong



Basin. Bangkok, Thailand, 25-27 March 2015, by Virapat, C., Wilkinson, S. and Soto, D. FAO Fisheries and Aquaculture Proceedings No. 45. Rome, Italy.

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[1] Tilley, A., Wilkinson, S.P., Kolding, J., Lopez-Angarita, J., Pereira, M. and Mills, D.J., 2019. Nearshore fish aggregating devices show positive outcomes for sustainable fisheries development in Timor-Leste. *Frontiers in Marine Science*, 6, p.487.

[2] Sokimi W., Blanc M., Colas B., Bertram I. and Albert J. 2020. *Manual on anchored fish aggregating devices (FADs): an update on FAD gear technology, designs and deployment methods for the Pacific Island region*. Noumea, New Caledonia: Pacific Community. 56 p

[3] Tsujimura, T.N., Alonso, E., Amaral, L.D.R., Rodrigues, P. 2012. *Safety at Sea Assessment in the Timor-Leste Small-scale Fisheries Sector*. FAO Technical report

[4] Tilley, A., Hunnam, K.J., Mills, D.J., Steenbergen, D.J., Govan, H., Alonso-Poblacion, E., Roscher, M., Pereira, M., Rodrigues, P., Amador, T. and Duarte, A., 2019. Evaluating the fit of co-management for small-scale fisheries governance in Timor-Leste. *Frontiers in Marine Science*, 6, p.392.

[5] Freed, S., Barman, B., Dubois, M., Flor, R.J., Funge-Smith, S., Gregory, R., Hadi, B.A., Halwart, M., Haque, M., Jagadish, S.V. and Joffre, O.M., 2020. Maintaining diversity of integrated rice and fish production confers adaptability of food systems to global change. *Frontiers in Sustainable Food Systems*, 4, p.207.

[6] Steenbergen, D.J., Marlessy, C. and Holle, E., 2017. Effects of rapid livelihood transitions: examining local co-developed change following a seaweed farming boom. *Marine Policy*, 82, pp.216-223.

[7] <http://blog.worldfishcenter.org/2017/08/mola-and-carp-fish-farming-a-winning-combination-to-boost-nutrient-intakes-in-bangladesh-and-beyond/>

[8] Mills, David J., et al. "Livelihood diversity and dynamism in Timor-Leste; insights for coastal resource governance and livelihood development." *Marine Policy* 82 (2017): 206-215.

**3. If this is a non-grant instrument, has a reflow calendar been presented in Annex D?**

Secretariat Comment at CEO Endorsement Request n/a

Agency Response

**Co-financing**

**4. Are the confirmed expected amounts, sources and types of co-financing adequately documented, with supporting evidence and a description on how the breakdown of co-financing was identified and meets the definition of investment mobilized, and a description of any major changes from PIF, consistent with the requirements of the Co-Financing Policy and Guidelines?**

Secretariat Comment at CEO Endorsement Request

CCA, 5/14/2021:

Cleared.

CCA, 12/22/2020:

Adjustments to Table C are requested.

- 1) Please categorize all "Grant" entries as "investment mobilized".
- 2) Please provide a brief summary on investment mobilized below Table C, which is required of all projects in addition to the explanation included in the co-finance letters.

Agency Response

- 1) This has been done
- 2) The investment mobilized is related to work on climate change adaptation, protected areas and MPAs, and area-based management and species conservation, and they are funds that have been mobilized by Conservation International, World Fish, the FAO, as well as the MCIE and MAF.

**GEF Resource Availability**

**5. Is the financing presented in Table D adequate and does the project demonstrate a cost-effective approach to meet the project objectives?**

Secretariat Comment at CEO Endorsement Request CCA, 5/14/2021:

Cleared. We note that motorbikes have been included in the budget for field coordinator expenses, together with other equipment, for a total of USD24,000 for the project duration. This is cleared by the PM.

CCA, 12/22/2020:

- 1) Cost-effectiveness will be determined after further details on proposed LDCF-supported adaptation technology investments have been provided (Output 2.2).
- 2) Please remove vehicle-related expenses from the budget.

#### Agency Response

**1. RESPONSE:** Output 2 has been revised with more detailed information about innovative technologies and practices.

**2) RESPONSE:** the vehicle-related expenses have been removed from the project.

#### Project Preparation Grant

**6. Is the status and utilization of the PPG reported in Annex C in the document?**

Secretariat Comment at CEO Endorsement Request 12/22/2020:

Yes.

#### Agency Response

##### Core indicators

**7. Are there changes/adjustments made in the core indicator targets indicated in Table E? Do they remain realistic?**

Secretariat Comment at CEO Endorsement Request CCA, 5/14/2021:

Adjustments are requested.

Comment (2) of 12/22/2020 has not yet been addressed. In the Indicators worksheet, the table at the very top with orange cells is intended for the Core Indicator values that had been submitted at PIF-approval stage. Please do not over-write these with the CEO Endorsement stage Core Indicators. Please re-enter the PIF-stage Core Indicators in the orange cells. The CEO Endorsement stage Core Indicators should appear in the column to the right of it.

BD, 5/14/2021:

Not yet. Please report protected areas or mainstreaming within freshwater ecosystems under the relevant terrestrial indicators. Calculations of terrestrial area generally include freshwater bodies.

CCA, 12/22/2020:

Adjustments are requested.

- 1) In the LDCF Metadata sheet, please tick the box for SIDS.
- 2) Indicators: In the top section on the core indicators, please do not delete the core indicator values that were provided at PIF stage. These should be in the left-most column. Enter the CEO Endorsement stage core indicators to the left of this (PIF stage) column.
- 3) Please provide an explanation for Core indicator 2 (area of land managed for climate resilience). A figure of over 800,000 ha has been entered, which is over half the area of the country.

## Agency Response

### Responses to comments made on 5/14/21

1. The updated CCA worksheet has been uploaded.

2. Regarding freshwater ecosystems, the project will be working in the Ira Lalaro Lake (Lautem Municipality). The lake has an average water spread area of 1900 ha. The project's work will cover about 20% of this area, which is 380 ha. The core indicator sheet has been updated accordingly.

1) This has been done

2) This has been done

3) *RESPONSE: The value has been revised, estimating that the project will cover at least 20 % of each municipality. The Core Indicator 2 (LDCF) is now 155,000 ha.*

Districts	Land area (square km)[1]	20% of land area (sq km)
Aileu	729	145
Atauro	140	28
Bobonaro	1 368	273
Covalima	1 226	245
Lautem	1 702	340
Oecusse	815	163
Viqueque	1 781	356
Total	7 761	1 550

[1] Source: <http://timor-leste.gov.tl/?p=91&lang=en>

## Part II ? Project Justification

**1. Is there a sufficient elaboration on how the global environmental/adaptation problems, including the root causes and barriers, are going to be addressed?**

### Secretariat Comment at CEO Endorsement Request

CCA, 5/14/2021:

Not yet. The project write-up states that the Theory of Change (ToC) is available in Annex N. We are unable to locate Annex N among the uploaded documents. If possible please paste the ToC into the Portal entry template for this project.

BD, 5/14/2021:

Not yet.

- Theory of Change ? This project needs a robust theory of change to justify the biodiversity benefits of the fisheries activities. This is crucial because it will depend on behavior change. We have seen GEF projects where improved fishing resources developed in an attempt to shift livelihoods resulted in increased effort. There is no guarantee that people will not simply do both types of fishing with the resources provided. Therefore, it is very important to work through the assumptions embedded in the behavior change required for the project to be able to try to mitigate these potential negative consequences as well as test the hypotheses inherent in the assumptions made. Culture and preference may well make it unlikely that there will be a significant reduction in reef fishing.
  - o It is notable that if there is a well-articulated project logic and ToC ? not every specific activity needs to be linked back to BD benefits but rather as fitting in as part of the logic as a whole. In some cases, work may be principally adaptation or biodiversity focused and that is ok.

CCA, 12/22/2020:

Please note that some required elements are missing from the CER that should be included even if they are available in the agency project document, such as the Theory of Change, and M&E Plan.

### Agency Response

Response to comments made on 5/14/21

The Theory of Change has been revised following the suggestions and is provided as Annex N.

This has been done

**2. Is there an elaboration on how the baseline scenario or any associated baseline projects were derived?**

Secretariat Comment at CEO Endorsement Request

CCA, 12/22/2020:

Yes.

Agency Response

**3. Is the proposed alternative scenario as described in PIF/PFD sound and adequate? Is there sufficient clarity on the expected outcomes and components of the project and a description on the project is aiming to achieve them?**

Secretariat Comment at PIF/Work Program Inclusion

CCA, 5/14/2021:

Cleared.

CCA, 12/22/2020:

Please see CCA comments for review item 2 of Part I of the review sheet.

BD, 1/26/2021:

No, this project rests heavily on assumptions about how policies or capacity building will result in changes in biodiversity status and the causal chain that gets you there. Please elaborate on this to better lay out your assumptions.

Agency Response Sections have been revised.

**4. Is there further elaboration on how the project is aligned with focal area/impact program strategies?**

Secretariat Comment at CEO Endorsement Request

CCA, 12/22/2020:

Yes.

BD, 1/26/2021:

No, this project focuses heavily on capacity building and plan development with little actual on-the-ground implementation. An effective mainstreaming project would include a mix of both to provide opportunities for learning by doing.

It may be helpful to clarify that the MPAs are part of mainstreaming efforts.

While it may be a reflection of other activities of other entities, please note that the GEF does not exist to create decent rural jobs but rather deliver GEBs and adaptation benefits. Therefore, some of the activities described on page 37 are not part of the GEF's remit.

#### Agency Response

**o RESPONSE:** Activities under component 2 are largely focus on providing capacity building to communities, not only through training, but also mostly through technical advice and on the ground support, including material support as necessary.

**o RESPONSE:** The section on Decent rural employment is part of FAO's Environment and Social Safeguards, to ensure that global environment benefits are delivered and project development objectives are achieved with due regard to human rights and international standards. The text has been revised.

**5. Is the incremental reasoning, contribution from the baseline, and co-financing clearly elaborated?**

#### Secretariat Comment at CEO Endorsement Request

CCA, 5/14/2021:

Yes.

CCA, 12/22/2020:

Please see CCA comments for review item 2 of Part I of the review sheet.

#### Agency Response

**o RESPONSE:** The relevant sections have been revised following the suggestions.

**6. Is there further and better elaboration on the project's expected contribution to global environmental benefits or adaptation benefits?**

#### Secretariat Comment at CEO Endorsement Request

CCA, 5/14/2021:

Yes.

CCA, 12/22/2020:

As discussed in review item 2 of Part I of the review (on Table B), above, further information is needed on the proposed adaptation technologies to be supported by the project.

BD, 1/26/2021:

The hectare numbers are rather low for the amount of money requested. We would like to see more resources of implementation of activities.

#### Agency Response

o **RESPONSE:** For the indicator: ?Area of marine habitat under improved practices (excluding protected areas) (Hectares)? after revision taking into account the inshore area covering the municipalities of the project, the indicator has been increased from 1,220 ha to 33,540 ha.

**7. Is there further and better elaboration to show that the project is innovative and sustainable including the potential for scaling up?**

#### Secretariat Comment at CEO Endorsement Request

CCA, 5/14/2021:

Cleared.

CCA, 12/22/2020:

The approach is innovative. However, further information is requested on the innovative adaptation technologies.

BD, 1/26/2021:

Innovation ? We welcome the combination of adaptation and marine biodiversity in a project and we hope that it will yield real results for the reefs and the people of Timor Leste.

Sustainability ? This project?s focus on capacity building does not provide for sustainability planning. One of the major risks identified is the high turnover of staff which means that capacity development and planning activities would likely have a relatively short life if not well designed.

#### Agency Response

On innovation and sustainability:

o **RESPONSE:** Capacity development will be guided by FAO?s corporate approach emphasizing that capacities at the individual, organization, and enabling environment are interlinked. Training as one aspect of capacity development will be linked with activities on the ground, such as the strengthening of co-management committees and fish farmer clusters. The training on ecosystem approach to fisheries management and ecosystem-based adaptation will be linked to and will strengthen the implementation and use of PeskAAS[1] for



decision-making, which is a near real-time monitoring of small-scale fisheries in Timor-Leste. The project will also work with the Biodiversity and Climate Change Network to develop training modules that can be delivered beyond the lifetime of the project. The high turnover of government officers usually happens at the higher level; in case they move to another office or agency, the capacity stays within the country and is not lost. Many of the fisheries officers at the sub-national level have been in their jobs for a long time. FAO as the implementing agency, and WorldFish as the executing agency for the project, have a strong presence in country. WorldFish is hosted by the Government of Timor-Leste, has a long-standing relationship with the government, and has developed and implemented successful projects with them.

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[1] See <http://www.fao.org/3/cb2030en/CB2030EN.pdf>

#### **Project Map and Coordinates**

**Is there an accurate and confirmed geo-referenced information where the project intervention will take place?**

Secretariat Comment at CEO Endorsement Request

5/20/1021:

Yes.

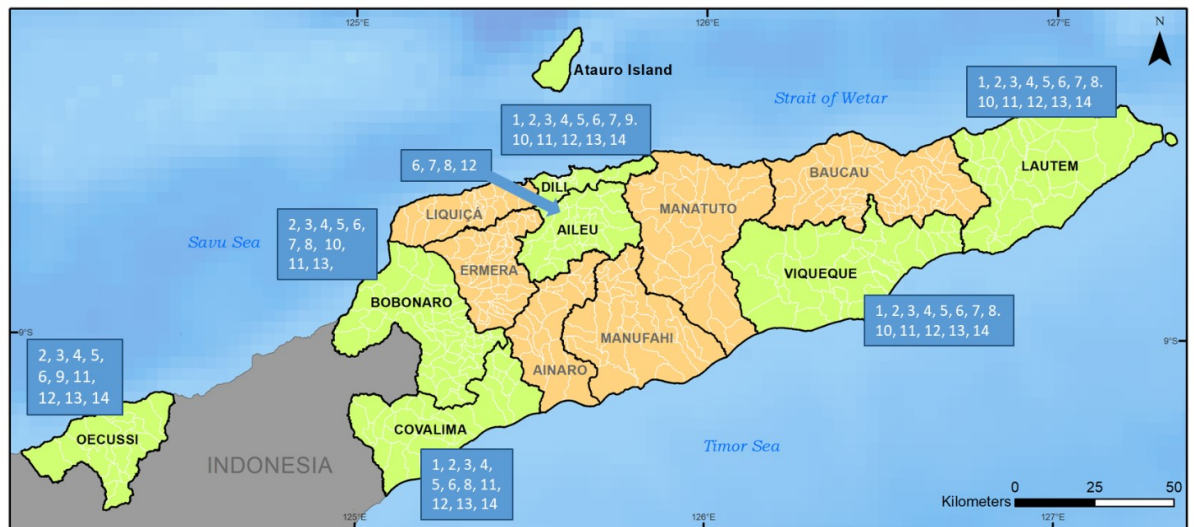
BD, 1/26/2021:

No, the project's maps lack specificity that we would expect at CEO Endorsement. The maps do not provide sufficient information.

#### **Agency Response**

- **RESPONSE:** The map with the information of tentative activities has been provided in section 1.b. Interventions will ultimately be selected and prioritised through community planning processes ? plausible interventions for each district, including those highlighted in early consultations, are listed here (See outputs 2.2 for detail). Project districts highlighted in green. 1) fishing methods; 2) sea safety; 3) co-management; 4) post-harvest; 5) infrastructure adaptations; 6) skills training; 7) aquaculture infrastructure; 8) integrated agriculture/aquaculture; 9) nearshore

mariculture; 10) culture species diversification; 11) LMMA/MAP development; 12) ecosystem restoration; 13) improved spatial management; 14) alternative livelihoods.



#### Child Project

If this is a child project, is there an adequate reflection of how it contributes to the overall program impact?

Secretariat Comment at CEO Endorsement Request

n/a

Agency Response

Stakeholders

Does the project include detailed report on stakeholders engaged during the design phase?  
Is there an adequate stakeholder engagement plan or equivalent documentation for the implementation phase, with information on Stakeholders who will be engaged, the means of engagement, and dissemination of information?

Secretariat Comment at CEO Endorsement Request

BD, 5/14/2021:

Not yet.

Apparently there are issues related to indigenous peoples, but that is basically absent from the document and the safeguard documentation appears to be minimal. The GEF's safeguard on IPs is not limited to access to genetic resources, which it appears was the

only one considered under FAO's safeguards. Please provide more information including verifying that FPIC will be assured through FAO's processes. We understand that FPIC may not be possible at this point in project development, much less under COVID, however, projects that potentially restrict access to natural resources need to make that all safeguards all followed both in letter and spirit. FAO has a strong indigenous peoples team that should be able to assist on this issue.

CCA, 5/14/2021:

Given the COVID-19 situation in the country, could you please also discuss how the project will contribute to green recovery and building back better?

CCA, 12/22/2020:

Further information is requested:

- 1) The ProDoc states that due to Covid-19, several meetings took place online instead of face-to-face. Please discuss how it was ensured that the perspectives of the poorest and most vulnerable (who often do not have internet access) were included in this process, and how their views will continue to be sought out.
- 2) Please discuss how traditional knowledge has been and will be integrated in project design and implementation.

## Agency Response

- Response to comments made on 5/14/21

The text for IP has been revised and it is provided as Annex J.

Even though most of the population in Timor-Leste could be considered indigenous, there are as many as 34 ethno-linguistic groups living in about 2 300 villages across the country. Some 97 percent of rural land ? i.e. nearly the whole country ? follows customary rules ? and the different ethnic groups can face different challenges and vulnerabilities. As noted by the report of the former Special Rapporteur on the rights of IPs, ?some 70 per cent of Timorese live in rural areas and practice subsistence farming and fishing. Government sources emphasize the diversity of indigenous groups in Timor-Leste, reflected in the multitude of indigenous languages and cultural practices. Tetum speakers accounting for about 25 per cent of the population, are the largest indigenous group; other groups include the Mambae, Kemak, Bunak and Fataluku. Some of the ethnic minorities are more vulnerable facing higher constraints than people in Dili.

Since indigenous Peoples are present in the project intervention area (despite not being defined as such), the project will continue obtaining the FPIC (which was initiated during PPG phase), particularly previous to the implementation of the activities. During the Inception Phase, the project will prepare a full IP plan.

**The following text has been added on Green Recovery and Building Back Better**

|

The IkanAdapt project is aligned with the Plan of Economic Recovery developed by the Government of Timor-Leste to address challenges that were intensified due to the Covid-19 pandemic. The Plan has two main phases. Phase 1 is focused on the very short term (imminent actions) to support the mitigation of the impacts caused by the Covid-19 related emergency, while Phase 2 focuses in the medium term (3 to 4 years) to address structural problems (including the lack of employment). In particular, the IkanAdapt will be able to support the government's plan to support informal jobs (e.g. fisheries related jobs), such as facilitating fisher's registration in the country's social security system, and therefore allow them to access social protection measures (e.g. accessing basic food basket), and the promotion of decent jobs and new products (e.g. Nosso Produto (Our Product) can include fisheries related products). The Plan has identified agriculture as 'the fastest way to achieve economic progress for the benefit of more than two-thirds of our population living in the interior of the country', while recognizing that adequate agriculture management 'is crucial for the protection of the environment, biodiversity, water resources', and that 'improving food security and protecting our economy from future crises. The threat of COVID-19 has taught us to place greater importance on high food production to meet the basic needs of the population and to ensure that there is enough food and food'. The Plan lacks specific information on how fisheries can contribute to achieving these objectives, which can be complemented by the lessons learned and guidance provided by the IkanAdapt project, which focuses on climate change adaptation and biodiversity conservation. This will contribute directly to goals related to green recovery and building back better.

*1) The ProDoc states that due to Covid-19, several meetings took place online instead of face-to-face. Please discuss how it was ensured that the perspectives of the poorest and most vulnerable (who often do not have internet access) were included in this process, and how their views will continue to be sought out.*

**- RESPONSE:** Face-to-face consultations were conducted in all seven municipalities with the aim of providing information regarding the project and understanding the perspectives of community representatives (men, women, youth), village leaders and elders with regards to participating in the project activities. Due to COVID-19 restrictions, these meetings were difficult to follow up. Online meetings were also done with project partners owing to COVID-19 restrictions. During implementation, participatory approaches will be used to ensure that the perspectives of the poorest and most vulnerable are taken into consideration and integrated into project interventions. The project will also have a Gender Specialist who will ensure that the different needs of men and women and intersection of gender with other factors such as socioeconomic status and (dis)ability are taken into consideration.

*2) Please discuss how traditional knowledge has been and will be integrated in project design and implementation.*

- **RESPONSE:** Traditional knowledge will be integrated as part of the participatory approaches as well as in the co-development of technologies and early warning system. Under Output 1.4, the roles of the traditional management systems (such as *Tara Bandu*) as well as their capacity to become effective mechanisms for climate change adaptation and biodiversity conservation will be assessed and formalized in strategies and laws as appropriate. An activity under this output is: Strengthen co-management mechanism through integration of good practices in traditional management practices (e.g. *Tara Bandu*) and ecosystem approaches, such as EbA and EAFM and biodiversity conservation. Under Output 2.4, the development of new or strengthening of existing marine managed areas will be achieved, among others, through establishment of strategies for improved compliance and adherence to locally established management rules and regulation (e.g. *Tara Bandu*).

#### Gender Equality and Women's Empowerment

Has the gender analysis been completed? Did the gender analysis identify any gender differences, gaps or opportunities linked to project/program objectives and activities? If so, does the project/program include gender-responsive activities, gender-sensitive indicators and expected results?

#### Secretariat Comment at CEO Endorsement Request

CCA, 5/14/2021:

Further information is requested. Information has been presented on the current constraints faced by women and on measures the project will take to ensure their participation in project activities. We would appreciate further qualitative information on the nature of the socio-economic and climate resilience benefits women are likely to benefit from as a result of the project.

CCA, 12/22/2020:

Further information is requested. A Gender Action Plan has been submitted that outlines constraints faced by women and how they will be engaged in project activities. Please also provide a brief overview of how the proposed actions targeted at women are expected to reduce women's vulnerability and generate socio-economic benefits for them.

#### Agency Response

Response to comment made on 5/11/21

Please refer to Annex O (Gender Action Plan) for specific information on the activities and outputs targeted for women.

Activities identified during the PPG phase that are particularly relevant for women include:

- Participation along the fisheries value chain, including fishing, processing and selling.
- Seaweed culture and processing of seaweed products.

**RESPONSE:** Following the Gender Action Plan, the project will work on reducing women's vulnerability to climate change and generate socio-economic benefits. This will be done by improving the participation of women in decision-making, facilitating their participation in project activities by bringing the activities close to women and at times of the day it is easier for them to attend. The provision of support to improve women's participation in livelihood activities (e.g. fish post-harvest, aquaculture) will also directly enhance their socio-economic benefits. The project will also rely on the use of networks and gender focal points, as well as the identification of success stories, to share examples of successful female entrepreneurs and participation in decision-making for fisheries management and biodiversity conservation.

#### Private Sector Engagement

**If there is a private sector engagement, is there an elaboration of its role as a financier and/or as a stakeholder?**

#### Secretariat Comment at CEO Endorsement Request

CCA, 12/22/2020:

Yes. The project will engage with the private sector aquaculture industry in Timor-Leste on integration of climate adaptation considerations, particularly through adaptation technologies and sharing of climate risk information. It will also work with businesses such as handicrafts, tourism, etc.) for the provision of livelihood diversification options for fish and fish-farming communities, with a focus on women.

#### Agency Response

##### Risks to Achieving Project Objectives

**Has the project elaborated on indicated risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved? Were there proposed measures that address these risks at the time of project implementation?**

#### Secretariat Comment at CEO Endorsement Request

CCA, 5/14/2021:

Not yet. Please upload the climate risk assessment. Annex H is the Work Plan, not the climate risk assessment. The climate risk assessment needs to be undertaken as part of

project preparation to ensure that proposed activities/investments can be resilient in the face of climate variability and change. For example, whether the proposed fish species/seaweed variety can thrive in current and projected climatic conditions. The risk screening also seeks to ensure that the project will not pose risks to communities/ecosystems when taken in conjunction with climate variability and change. It may be considered in the same way as other environmental and social safeguards.

CCA, 12/22/2020:

Further information is requested.

At this (CER) stage, we would like to see an assessment of the climate risks identified at PIF stage, and the measures the project is taking to address these. Even though the project is supporting adaptation to climate change, its outputs and outcomes could be negatively impacted by climate variability and change if these risks are not assessed and factored into design. Information and any analysis on how the assessments and design decisions were taken to climate-proof activities would be relevant in this context, for example.

#### Agency Response

Response to comment made on 5/14/21

Apologies for the confusion. The update on climate risk assessment is provided in Annex K. This has been uploaded in the document section.

On the issues identified on seaweed/ fish species, the following text has been highlighted in the annex:

#### **1. *Tilapia fish rearing***

Tilapia fish rearing has been used as one approach to support local fishers' livelihoods in many parts of the world. The fish is considered very tolerant of high temperatures, so represent a climate change adaptation opportunity[1]. In addition small-pond aquaculture is considered more disaster resilience as such fishponds are largely unaffected by cyclonic winds. There are challenges to tilapia farming, but many examples exist on good practices/ management practices that enable the fish to thrive under challenging conditions[2].

Coping strategies adopted by tilapia farmers in the Philippines would be considered by the IkanAdapt project, among these are: (i) increasing the height of pond dikes, deepening ponds from 1 to 2 meters to increase water volume; (ii) use of net enclosures and supplementing water supply by means of pump; (iii) the use of fine-mesh nets for shading similar to that for protecting plants sensitive to sunlight in agriculture to lessen pond water temperature (Guerrero III, R.D., 2017[3]).

#### **2. *Seaweed farming***

Seaweed aquaculture contributes to climate change adaptation by damping wave energy and protecting shorelines, and by elevating pH and supplying oxygen to the waters, thereby locally reducing the effects of ocean acidification and de-oxygenation[4].

Although it is difficult to predict the consequences of global climate change on the seaweeds and seagrasses of any given bay or estuary[5], some assessments have noted that much is known about seaweed acclimation (an individual-level response to experimental manipulation of the environment), acclimatization (an individual level response to natural variation in the environment), and local adaptation (a population-level response to natural environmental variation) as a consequence of variation in temperature, salinity, light, and wave forces. Appropriately acclimated/acclimatized individuals or adapted populations may be better able to withstand coming environmental change[6]. Seaweed farming also provides an opportunity for fishing communities to adapt to climate change, and diversifying women's livelihoods by enhancing the processing and marketing of seaweed products[7].

A coping strategy adopted for seaweed farming in the Philippines to minimize the occurrence of 'ice-ice disease' would be considered by the IkanAdapt project. This coping strategy involves 'growing the plants with floating monolines in deep coastal waters instead of with fixed monolines in shallow waters to avoid high sea surface temperature and intense exposure to sunlight particularly during the hot weather months' (Guerrero III, R.D., 2017).

### **3. *Rice-fish cultivation***

This has been introduced in a number of Asia countries as an adaptation measure (see <http://www.fao.org/3/i3569e/i3569e.pdf>). Rice-fish cultivation maximizes the use of land and water resources in areas where both of these resources are limited (FAO, 2019 available at <http://www.fao.org/3/ca5770en/CA5770EN.pdf>).

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[1] <https://www.spc.int/updates/news/2019/03/small-pond-tilapia-aquaculture-and-aquaponics-featured-at-global-climate>

[2] <https://idl-bnc-idrc.dspacedirect.org/bitstream/handle/10625/55973/IDL-55973.pdf>

[3] <https://www.nast.ph/images/pdf%20files/Publications/Bulletins/NAST%20Bulletin%20No.%2011%20Coping%20Strategies%20for%20Climate%20Change%20Impacts%20on%20Philippine%20Aquaculture.pdf>

[4] [https://www.researchgate.net/publication/316055403\\_Can\\_Seaweed\\_Farming\\_Play\\_a\\_Role\\_in\\_Climate\\_Change\\_Mitigation\\_and\\_Adaptation](https://www.researchgate.net/publication/316055403_Can_Seaweed_Farming_Play_a_Role_in_Climate_Change_Mitigation_and_Adaptation)

[5] [https://www.researchgate.net/publication/320753698\\_A\\_review\\_on\\_effect\\_of\\_global\\_climate\\_change\\_on\\_seaweed\\_and\\_seagrass](https://www.researchgate.net/publication/320753698_A_review_on_effect_of_global_climate_change_on_seaweed_and_seagrass)

[6] [https://www.zoology.ubc.ca/~kordas/Rebecca\\_Kordas/Publications\\_files/Harley%2012%20Journal%20of%20Phycology.pdf](https://www.zoology.ubc.ca/~kordas/Rebecca_Kordas/Publications_files/Harley%2012%20Journal%20of%20Phycology.pdf)



[7] <http://www.fao.org/3/ar486e/ar486e.pdf>

- **RESPONSE:** The climate risk screening has been provided as Annex H, and the recommendations have been integrated as part of the project development process.

#### **Coordination**

**Is the institutional arrangement for project implementation fully described? Is there an elaboration on possible coordination with relevant GEF-financed projects and other bilateral/multilateral initiatives in the project area?**

Secretariat Comment at CEO Endorsement Request

CCA, 12/22/2020:

Yes.

Agency Response

**Consistency with National Priorities**

**Has the project described the alignment of the project with identified national strategies and plans or reports and assessments under the relevant conventions?**

Secretariat Comment at CEO Endorsement Request

CCA, 12/22/2020:

Yes.

Agency Response

**Knowledge Management**

**Is the proposed ?Knowledge Management Approach? for the project adequately elaborated with a timeline and a set of deliverables?**

Secretariat Comment at CEO Endorsement Request

CCA, 5/14/2021:

Cleared.

CCA, 12/22/2020:

Could you please provide more information on how communities' experiences and perspectives will be captured for distilling lessons learned?

#### Agency Response

- **RESPONSE:** The Knowledge Management strategy of the project will ensure that communities' experiences and perspectives are being captured during project execution, following the Most Significant Change (MSC) methodology, based on the participatory collection and selection of stories of change, engaging project stakeholders throughout the project, and developing lessons learned.

#### Environmental and Social Safeguard (ESS)

**Are environmental and social risks, impacts and management measures adequately documented at this stage and consistent with requirements set out in SD/PL/03?**

#### Secretariat Comment at CEO Endorsement Request

BD, 5/14/2021:

See comment on Indigenous Peoples in "Stakeholders" section, above.

CCA, 5/14/2021:

Please see comment on climate risk assessment in the "Risks" section of the review sheet.

CCA, 12/22/2020:

Please see comment on climate risk assessment in the "Risks" section of the review sheet.

#### Agency Response

Responses to comments made on 5/14/21 have been addressed earlier

- **RESPONSE:** The climate risk screening has been provided as Annex H, and the recommendations have been integrated as part of the project development process.

#### Monitoring and Evaluation

**Does the project include a budgeted M&E Plan that monitors and measures results with indicators and targets?**

#### Secretariat Comment at CEO Endorsement Request

12/22/2020:

Yes.

#### Agency Response

##### Benefits

**Are the socioeconomic benefits at the national and local levels sufficiently described resulting from the project? Is there an elaboration on how these benefits translate in supporting the achievement of GEBs or adaptation benefits?**

Secretariat Comment at CEO Endorsement Request

CCA, 12/22/2020:

Yes.

Agency Response

**Annexes**

**Are all the required annexes attached and adequately responded to?**

Secretariat Comment at CEO Endorsement Request

Agency Response

**Project Results Framework**

Secretariat Comment at CEO Endorsement Request 12/22/2020:

Yes.

Agency Response

**GEF Secretariat comments**

Secretariat Comment at CEO Endorsement Request CCA, 12/22/2020:

Yes.

Agency Response

**Council comments**

Secretariat Comment at CEO Endorsement Request CCA, 5/14/2021:

Yes. Responses have been provided to comments by the Norway-Denmark Constituency (Annex B1) and by Germany and the US (Annex B2).

12/22/2020:

Not yet.

Please advise where we may find Agency responses to comments provided by Germany and the US.

Agency Response

- **RESPONSE:** comments from Germany and the US have been addressed and are provided as Annex B2.

**STAP comments**

Secretariat Comment at CEO Endorsement Request CCA, 5/14/2021:

No. We can no longer locate the responses to STAP comments at time of PIF approval.

Please let us know where these are available or re-upload these, thank you.

CCA, 12/22/2020:

Yes.

Agency Response

Response to comment made on 5/14/21

All the comments and the responses to the comments have been included as part of Annex B for easy reference.

**Convention Secretariat comments**

Secretariat Comment at CEO Endorsement Request n/a

Agency Response

**Other Agencies comments**

Secretariat Comment at CEO Endorsement Request n/a

Agency Response

**CSOs comments**

Secretariat Comment at CEO Endorsement Request n/a

Agency Response

**Status of PPG utilization**

Secretariat Comment at CEO Endorsement Request Yes.

## Agency Response

### Project maps and coordinates

## Secretariat Comment at CEO Endorsement Request

5/20/2021:

Yes.

BD, 1/26/2021:

No, the project's maps lack specificity that we would expect at CEO Endorsement. The maps do not provide sufficient information.

## Agency Response

- **RESPONSE:** A new map has been provided with more information of the activities that will take place during the project execution.

**Does the termsheet in Annex F provide finalized financial terms and conditions? Does the termsheet and financial structure address concerns raised at PIF stage and that were pending to be resolved ahead of CEO endorsement? (For NGI Only)**

## Secretariat Comment at CEO Endorsement Request

n/a

## Agency Response

**Do the Reflow Table Annex G and the Trustee Excel Sheet for reflows provide accurate reflow expectations of the project submitted? Assumptions for Reflows can be submitted to explain expected reflows. (For NGI Only)**

## Secretariat Comment at CEO Endorsement Request n/a

## Agency Response

**Did the agency Annex H provided with information to assess the Agency Capacity to generate and manage reflows? (For NGI Only)**

## Secretariat Comment at CEO Endorsement Request

## Agency Response

## GEFSEC DECISION

## RECOMMENDATION

**Is CEO endorsement recommended? (applies only to projects and child projects)**

**Secretariat Comment at CEO Endorsement Request**

CCA and BD, 5/20/2021:

Not yet. Please address CCA and BD review comments of 5/14/2021 for the following:

Part I of the review sheet: item 2 (project design) and item 7 (core indicators)

Part II of the review sheet: item 1 and items on Stakeholders, Gender, Risks, Env & Social Safeguards, and STAP comments.

CCA and BD, 2/5/2021:

Not yet. Please address the review comments for the following:

Part I of review sheet: items 2, 4, 5, 7

Part II of review sheet: items 1, 3, 4, 5, 6, 7 and sections on Maps, Stakeholders, Gender, Risks, Knowledge Management, ESS, and Council Comments.

**Review Dates**

	<b>Secretariat Comment at CEO Endorsement</b>	<b>Response to Secretariat comments</b>
<b>First Review</b>	<b>12/22/2020</b>	
<b>Additional Review (as necessary)</b>	<b>2/5/2021</b>	
<b>Additional Review (as necessary)</b>	<b>5/20/2021</b>	
<b>Additional Review (as necessary)</b>		
<b>Additional Review (as necessary)</b>		