



# REQUEST FOR CEO ENDORSEMENT

**PROJECT TYPE: Full-sized Project**

**TYPE OF TRUST FUND: LDCF**

## PART I: PROJECT INFORMATION

Project Title: Building Climate Change Resilience in the Fisheries Sector in Malawi			
Country(ies):	Malawi	GEF Project ID: <sup>1</sup>	5328
GEF Agency(ies):	FAO	GEF Agency Project ID:	620333
Other Executing Partner(s):	Department of Fisheries	Submission Date:	14 June 2016 12 August 2016
GEF Focal Area (s):	CCA	Project Duration(Months)	60
Name of Parent Program (if applicable): ➤ For SFM/REDD+ <input type="checkbox"/> ➤ For SGP <input type="checkbox"/> ➤ For PPP <input type="checkbox"/>	N/A	Project Agency Fee (\$):	518,700

### **A. FOCAL AREA STRATEGY FRAMEWORK<sup>2</sup>**

<b>Focal Area Objectives</b>	<b>Expected FA Outcomes</b>	<b>Trust Fund</b>	<b>Grant Amount (\$)</b>	<b>Co-financing (\$)</b>
<b>CCA-1: Reducing Vulnerability:</b> Reduce vulnerability to the adverse impacts of climate change, including variability, at local, national, regional and global level	<b>Outcome 1.1:</b> Mainstreamed adaptation in broader development frameworks at country level and in targeted vulnerable areas <b>Outcome 1.2:</b> Reduced vulnerability to climate change in development sectors <b>Outcome 1.3:</b> Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas	LDCF	2,162,010	4,800,000
<b>CCA-2: Increasing Adaptive Capacity:</b> Increase adaptive capacity to respond to the impacts of climate change, including variability, at local, national, regional and global level	<b>Outcome 2.1:</b> Increased knowledge and understanding of climate variability and change-induced threats at country level and in targeted vulnerable areas <b>Outcome 2.2:</b> Strengthened adaptive capacity to reduce risks to climate-induced economic losses <b>Outcome 2.3:</b> Strengthened awareness and ownership of adaptation and climate risk reduction processes at local level	LDCF	2,347,800	5,211,000
<b>CCA-3: Adaptation Technology Transfer:</b> Promote transfer and	<b>Outcome 3.1:</b> Successful demonstration, deployment, and transfer of relevant adaptation technology in targeted areas	LDCF	950,190	2,109,000

<sup>1</sup> Project ID number will be assigned by GEFSEC.

<sup>2</sup> Refer to the [Focal Area/LDCF/SCGE Results Framework](#) when completing Table A.

adoption of adaptation technology	<b>Outcome 3.2:</b> Enhanced enabling environment to support adaptation-related technology transfer			
<b>Total</b>			<b>5,460,000</b>	<b>12,120,000</b>

## B. PROJECT FRAMEWORK

<b>Project Objective:</b> To improve the resilience of fishing communities around Lake Malombe to the effects of climate change						
<b>Project Component</b>	<b>Grant Type</b>	<b>Expected Outcomes</b>	<b>Expected Outputs</b>	<b>Trust Fund</b>	<b>Grant Amount (\$)</b>	<b>Confirmed Co-financing (\$)</b>
<b>1:</b> Strengthening access to information and knowledge regarding climate change and its implications.	TA	<p><b>1.1:</b> Enhanced access to and use of information on climate trends, extreme events and resource status, necessary for the formulation and implementation of effective and timely resilience and management measures:</p> <ul style="list-style-type: none"> <li>- 80% of DoF staff in 28 Districts nationwide, 80% of staff in Mangochi district authority, leaders of 3 Traditional Authorities (TA) and leaders of 29 BVCs have access to relevant and understandable information</li> <li>- All limits on fishing practices and gear, all district and community level development plans and strategies in the project area and all resilience and restoration plans and strategies (both aquatic and terrestrial) are based on reliable information on the above parameters</li> </ul>	<p>1.1.1: Detailed Vulnerability and Disaster Risk Assessments (VDRAs) of 47 fishing communities around Lake Malombe</p> <p>1.1.2: Information resources on ecological parameters determining management and resilience options in and around Lake Malombe</p> <p>1.1.3: Climate and environmental monitoring and early warning (EWS) systems</p> <p>1.1.4: Strengthened fisheries monitoring system</p> <p>1.1.5: Mechanisms for dissemination and use of knowledge in adaptive management</p>	LDCF	788,567	3,476,189
<b>2:</b> Creating an enabling environment for the promotion of climate change resilience among fishing communities	TA/ IN V	<p><b>2.1:</b> CC resilience mainstreamed into key policy and planning instruments of relevance to fisheries and fishing communities:</p> <ul style="list-style-type: none"> <li>- Specific/increased reference to CC issues in the fisheries sector in the National Climate Change Policy and Disaster Risk Management Policy, MGDS, NAPA and ASWAp.</li> <li>- Climate resilience provided for explicitly, with corresponding budget allocation, in 1 District Development Plan, Area Development Plans of 3 TAs (Chimwala, Chowe, Mponda) and 45 Village Development Plans</li> </ul>	<p>2.1.1. Think tank on climate change in the fisheries and aquaculture sector with an integrated vision and incorporating results of CC and fisheries monitoring systems</p> <p>2.1.2. Policy review document</p> <p>2.1.3. A policy influencing strategy for mainstreaming climate resilient fisheries and aquaculture, developed and implemented.</p> <p>2.1.4 Policy guidance materials</p> <p>2.1.5. Guidelines/Code of Conduct for responsible CC-resilient aquaculture developments in riparian areas in Malawi</p>	LDCF	1,638,557 (INV = \$118,000)	4,371,429
		<p><b>2.2</b> Strengthened capacities of fisheries professionals and other relevant stakeholders to address climate resilience building in fisheries sector</p>	<p>2.2.1 Capacity development programme for staff of key institutions in relation to</p>			

		(target institutions: DoF HQ, District Fisheries Office Mangochi, 4 DoF sub-stations, 5 other districts along Lake Malawi, 2 Aquaculture Research Stations, Mangochi Fisheries College, 2 Fisheries Research Stations (Monkey Bay, Senga Bay), 27 BVCs, 47 Villages, 3 TAs and Mangochi District): - 50% of members of all target institutions have increased KAP score - 30% increase in recurrent budget approved for district fisheries offices in accordance with provisions of resource management and restoration plans, 40% increase in disbursement and 50% increase in execution	climate change preparedness and resilience building 2.2.2 Improved physical capacities for DoF to sustain the resilience strategies			
		<b>2.3</b> Strengthened awareness of climate change issues and responses of relevance to the fisheries sector and fishing communities: - 50% of supermarket consumers purchasing fish from Lake Malombe, 60% of traders in fish from Lake Malombe and 75% of fishers on Lake Malombe aware of fisheries resilience issues	2.3.1 National “Chambo” campaign, supporting behaviour change and motivation, rolled out			
<b>3:</b> Strengthening capacities at local level to increase the resilience of fishing communities to climate change	TA/ INV	3.1: Adaptive co-management and resource governance systems in support of climate-resilient capture fisheries: - 80% of people (men and women) in all major stakeholder groups consider that they are satisfactorily represented in co-management structures - 70% implementation of resource management plans - 80% of all categories of fishers comply with norms and regulations for resource co-management - 6,000ha additional no-take area	3.1.1: Multi-stakeholder co-management structures 3.1.2: Participatory resource management plan(s) 3.1.3: Norms and regulations for resource co-management 3.1.4: Enforcement mechanisms for resource co-management	LDCF	2,384,943 (INV = \$622,410)	2,314,286
		3.2: Fish stocks and habitats restored through EAFA approaches, resulting in: - 10ha covered by seine prevention objects (SPOs) - Planting of 40ha of aquatic vegetation - Increased representation of chambo from 2% to 9% - Proportion of kasawala (immature chambo less than 15 cm) in populations increases from 2% to 50%	3.2.1: A verified and updated restoration plan for Lake Malombe, including risk assessment 3.2.2: Restoration programme 3.2.3: Restocking programme for healthy native chambo			
		3.3: Aquaculture is climate-proofed and able to contribute to diverse and resilient livelihood strategies of the	3.3.1: Aquaculture resilience plan developed, implemented and underpinned through on-			

	most vulnerable sectors of the population: - 500 ponds with climate resilience measure	going research and impact tracking programme 3.3.2: Action learning and knowledge generation programme 3.3.3: Capacity development programme for resilient aquaculture 3.3.4: Impact tracking programme			
	3.4: Local people have access to diverse, pro-poor farming systems as a central element of resilient rural livelihoods: - 1,500 farms integrating aquaculture and efficient water management into diverse portfolio of CC resilience measures	3.4.1: Participatory extension programmes 3.4.2 Solar driers			
4. Monitoring and Evaluation and Adaptation learning	4.1 Project implementation is based on results-based management and application of lessons learned and good practices in current and future interventions.	4.1.1: Monitoring, evaluation and reporting system established, supporting adaptive project management 4.1.2: Mechanisms for effective management and dissemination of knowledge	LDCF	387,933	1,380,950
Subtotal				5,200,000	11,542,854
Project management Cost (PMC)				260,000	577,146
<b>Total project costs</b>				<b>5,460,000</b>	<b>12,120,000</b>

**C. SOURCES OF CONFIRMED CO-FINANCING FOR THE PROJECT BY SOURCE AND BY NAME (\$)**

Sources of Co-financing	Name of Co-financier (source)	Type of Co-financing	Co-financing Amount (\$)
Government	DoF	Grant	1,500,000
Government	DCCMS	Grant	300,000
Bilateral aid agency	FISH	Grant	5,500,000
GEF Agency	FAO (TCP)	Grant	470,000
GEF Agency	FAO (In Kind Contribution)	In kind	100,000
CSO	LUANAR	Grant	750,000
Government	MoAIWD	Grant	1,500,000
GEF Agency	UNDP	Grant	2,000,000
<b>Total Co-financing</b>			<b>12,120,000</b>

**D. TRUST FUND RESOURCES REQUESTED BY AGENCY, FOCAL, AREA AND COUNTRY**

GEF Agency	Type of Trust Fund	Focal Area	Country Name	(in \$)		
				Grant Amount (a)	Agency Fee (b)	Total c=a+b
FAO	LDCF	Climate Change Adaptation	Malawi	5,460,000	518,700	5,978,700
<b>Total Grant Resources</b>				<b>5,460,000</b>	<b>518,700</b>	<b>5,978,700</b>

**F. CONSULTANTS WORKING FOR TECHNICAL ASSISTANCE COMPONENTS:**

Component	Grant Amount (\$)	Co-financing (\$)	Project Total (\$)
Local consultants	972,250	2,158,181	3,130,431
International consultants	998,400	2,216,229	3,214,629

**G. DOES THE PROJECT INCLUDE A “NON-GRANT” INSTRUMENT?**

NA

**PART II: PROJECT JUSTIFICATION**

**A. DESCRIBE ANY CHANGES IN ALIGNMENT WITH THE PROJECT DESIGN OF THE ORIGINAL PIF**

**A.1 National strategies and plans or reports and assessments under relevant conventions**

1. No major changes from the approved PIF. the project is closely aligned with the ongoing in-country NAP process. The current NAPA highlights the following proposed interventions:

- Fish breeding to restock the lakes, rivers and dams,
- Improving knowledge and understanding on how temperature profiles in the lake disrupt fish breeding and survival,
- Establishing climate observations or monitoring systems on Lake Malawi, and
- Mainstreaming climate change into fisheries strategies.

2. Furthermore, lessons gained by implementing the project will also inform the follow-on revision of the NAPA through engagement with National Technical Committee on Climate Change, of which the Department of Fisheries is a member.

**A.2 GEF focal area and/or fund(s) strategies, eligibility criteria and priorities**

3. Reference has also been included that the project will contribute to CCA-3: Outcome 3.1 (successful demonstration, deployment, and transfer of relevant adaptation technology in targeted areas) and Outcome 3.2 (Enhanced enabling environment to support adaptation-related technology transfer).

**A.3 The GEF Agency’s comparative advantage:**

4. No changes from the approved PIF.

**A.4 The baseline project and the problem it seeks to address:**

5. The threats that the project seeks to address remain essentially the same as in the PIF, but significant additional detail has been added on the basis of extensive literature review and local consultation, which have permitted a deeper understanding of their nature, magnitude and underlying drivers.

6. The barriers that the project seeks to address remain essentially the same as in the PIF, but have been slightly reworded and restructured to improve clarity and correspondence with the revised component structure (see below).

PIF	CEO Endorsement
1. Limited systematic analysis of CC-related vulnerabilities in the fisheries sector	1. Limited knowledge and understanding of climate risks associated with the fisheries sector
2. Absence of reliable information and knowledge about CC risks and vulnerabilities	2. Inadequate Policy, Regulatory and Institutional Frameworks to Support CC-Resilience Strategies
3. Limited integration of fisheries-specific climate responses in national policies	3. Inadequate Capacities and Resources at Local Level to Sustain CC-Resilience Strategies
4. Generally low management capacities in the fisheries sector	

5. Limited understanding of possible adaptive responses in the fisheries sector	
6. Dysfunctional decision support mechanisms	

#### **A.5 Incremental / Additional cost reasoning:**

7. The structure of the components has been modified to improve the logical flow, as follows:

<b>PIF</b>	<b>CEO Endorsement</b>
<b>Component 1:</b> Mainstreaming climate change adaptation into fisheries sector policies and capacity building of key fisheries actors	<b>Component 1:</b> Strengthening access to information and knowledge regarding climate change and its implications.
<b>Component 2:</b> Building local level adaptive capacities	<b>Component 2:</b> Creating an enabling environment for the promotion of climate change resilience among fishing communities
<b>Component 3:</b> Climate monitoring and early warning system on Lake Malombe	<b>Component 3:</b> Strengthening capacities at local level to increase the resilience of fishing communities to climate change
<b>Component 4:</b> M&E and adaptation learning	Component 4: M&E and adaptation learning

8. This modified structure separates more clearly the project's actions and resource flows between different levels of operation and between different actors, in particular allowing the concentration of outputs related to information access in the first component, rather than splitting them between Components 1 and 3 as in the PIF.

9. Emphasis has also been placed on ensuring livelihood diversity as a key element of resilience, rather than placing excessive dependence on aquaculture on its own as a resilience option, which would have the potential to increase exposure to risk in the event of its failure.

#### **A.6 Risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and measures that address these risks:**

<b>Risks</b>	<b>Rating</b>	<b>Mitigation Measures</b>
Insufficient fisheries sector stakeholder capacities to absorb CC action needs	L	The support for this project in itself is an awareness raising and capacity support initiative. Careful planning of implementation arrangements and project activities address this risk. Primary and secondary stakeholders are targeted through strategically designed interventions under all project components. Primary stakeholder at the intervention site level will be actively engaged in all aspects of project interventions on site. DoF is the lead institution for the project and DoF district level staff are ultimately the drivers for the successful project execution. An awareness raising campaign on Chambo will be conducted, which will also address climate change sensitisation. A dedicated project technical support mechanism will be designed to ensure effective project execution. As indicated above, capacity building esp. within DoF is a focus of this project. Lessons learnt from this CC intervention will be unscaled to extension and research staff outside of Mangochi. Component 4 of the project specifically targets national level capacity support on a systemic level.
Low pilot level capacities	M	Dedicated local level support is firmly planned. The PPG phase entailed detailed stakeholder consultations in the project target area and with key institutions/governance structures. Participation, fishermen/ farmers action (research) approaches are central to the project design, as is ownership building. The project support structure is elaborate and facilitates for relevant back-stopping from the PMU and associated experts.

Restoration failures, e.g. difficulties in regenerating water plants & habitat, fingerling supply chain problems	M	During the PPG phase relevant expertise was consulted to set out a design concept that is considered feasible. By building a dual approach to habitat restoration, using experiences from elsewhere in the world to introduce artificial breeding habitat and areas for vegetation rehabilitation, while also introducing the co-management related measure of establishing “protected areas” where water vegetation could naturally re-establish itself is seen as a sensible option. Special care has been put into investigating the options for establishing a fingerling supply chain of relevant chambo species for restocking. Nevertheless, as large amount of fingerlings are foreseen to be introduced into the lake, it is important to establish relevant contracts and commitments to supply at project onset. Fish feeds for the aquaculture interventions must be available (can be imported from Zambia to start, if needed), and integrated poultry-natural feeds systems are explored.
Co-management failures, e.g. resistance to implement/ enforce agreed measures, criminal elements in community	M	The project will adopt a highly participatory approach based on extensive local consultation and fully involving local communities in all aspects of co-management, including the establishment of governance structures, the definition of norms and the formulation of management and restoration plans, all of which will be based on participatory analyses of needs. Emphasis will be placed on ensuring the continued local ownership of these elements, and also on tailoring all of the project’s interventions at local level to the needs of the different socioeconomic sectors within the target communities in order to promote social acceptance, sustainability and the equitable generation of benefits, and minimize the risk of conflicts.
Aquaculture failures, e.g. capacity of local partner too low to implement activities successfully negative climate impacts	MH	Aquaculture especially community-based has failed in Malawi many times, although there are some stories of success. The government of Malawi is committed to further invest into aquaculture development as one option for climate resilience building and achieving food security. The PPG phase invested into scoping local and international knowledge and best practices for setting out possible designs for an aquaculture component in the project, It is recognised that an intense investment into scoping and further developing the concept with the beneficiaries needs to be made at project onset. It is critical to engage the local communities in the final design concept, as well as in training and ownership building right from the beginning. A commercialised approach to supporting incubators will be tested. FAO has considerable experience in developing aquaculture projects and especially also in ensuring climate change resilience of aquaculture development.
Unintended environmental risks, e.g. genetic pollution, species imbalances, loopholes in effluent management	M	Both the restocking and the aquaculture components of this project bear some environmental risk, which are largely managed through a rigorous design concept. It is clear that this project will change Lake Malombe from a purely “naturally” managed system (including local people and overfishing) to an “engineered” system, into which fish species will be introduced in balances not previously recorded from the lake. A dedicated environmental monitoring programme under component 1 will be implemented to provide tracking information on all interventions. It was reported that some of the potential fingerling supplies maybe affected by “genetic pollution” and genetically modified elements. All project interventions will undergo continuous environmental screening as stipulated under the national EIA laws, and any identified risks will be addressed with the Technical Task team’s inputs and where needed with international expertise through FAO. This also goes for any other potential aquaculture related risks, including effluent water management.
Social/domestic conflict	L	Building climate change resilience – and changing failing systems –will come with social changes. There may be some resistance to change among actors in the communities who may feel their social and economic interests are threatened through the co-management proposals, particularly the improved enforcement of norms on damaging fishing practices. The project will address this risk by applying a fully inclusive and participatory approach to consultation and planning in relation to management strategies, organizational structures and governance, and will promote a range of technical management options (ranging from improved capture

		fisheries practices through integrating low-tech aquaculture into smallholder farming systems and medium-level commercial aquaculture), with the potential to generate benefits tailored to each of the stakeholder sectors, including those who fear potential marginalization..
Limited political will	L	By linking this project to the newly established national CC coordination mechanisms in the Planning Department and by addressing explicit NAPA priorities maximum alignment with national priorities is given. The participatory identification of the project focus through NAPA and engagement of key stakeholder during the PIF and PPG preparation should have laid a strong political commitment foundation for this project. Furthermore there is dedicated commitment from DoF and at the political level of MAFS to invest into food security in the light of climate risks – and fisheries is the obvious strategy for Malawi. The dedicated Chambo campaign will be designed to mobilize public and political support for the approach.
Climate related disasters	M	A severe flood event could potentially affect the intended local partners which could lead to unavailability to partner in the implementation of project activities. Aquaculture infrastructure could be destroyed, and impacts on the Lake Malombe ecosystem could be so dramatic that the invested restoration activities may seem lost. Severe droughts and heat could equally have detrimental impacts. The project will be designed to reduce vulnerability to extreme events and it is anticipated that local level project interventions would provide tangible benefits to the project stakeholders. Approaches and techniques will be tested and pioneered that may hopefully provide climate proofing beyond what we know.

**A.7 Coordination with other relevant GEF financed initiatives**

10. The DoF will seek to engage with relevant projects and partners on the national and district level, supported by the existing NCCSC and GEFSC structures coordinated by the Department of Environment. Relevant representation on the Project Steering Committee (see below) will enable flow of information and governance interaction.

11. Coordination with relevant projects with presence in Mangochi District will convene regular project update meetings amongst the community of practice in Mangochi. These meetings will be led by DoF and supported by the PMU. A meeting schedule will be agreed upon and will be set up according to demand, following the inception workshop.

12. The project will be closely coordinated with the following GEF-financed initiatives:

13. **AfDB-GEF LDCF project “Climate Adaptation for Rural Livelihoods and Agriculture (CARLA)”**. The goal of the CARLA project is to improve resilience to current climate variability and future climate change by developing and implementing adaptation strategies and measures that will improve agricultural production and rural livelihoods. Lessons learned in this on-going project which focuses on community level climate change adaptation have been considered in this project’s design, especially with a view too food security.

14. **WB-GEF multi-focal area “Shire Natural Ecosystems Management Project”**. Cutting across the biodiversity, sustainable land management and climate change focal areas, this project aimed to develop a strategic planning and development framework for the Shire River Basin and support targeted investments to improve land and water resources management, and associated ecological services and livelihoods in the Basin. Lessons learned are being considered for upper catchment climate actions needed, which will be part of the climate change awareness raising and learning with various institutions at district and sub-district level.

15. **UNDP-GEF LDCF project “Climate Proofing local development gains in rural and urban areas of Machinga and Mangochi Districts Malawi”**. This project will utilize community-based approaches to adaptation in order to mainstream climate change considerations into the baseline programmes



(decentralization and agricultural subsidy programme). Thus increasing the resilience of local economic development in the Shire River basin. The goal of the project is to secure the development and food security gains from the baseline programs by empowering communities to integrate climate risk considerations in the development policies, plans, projects and actions. The project will provide knowledge, tools, capacities and methodologies for the adoption of an ecosystems and community based approach to adaptation, which is more effective in enabling climate vulnerable people to plan for and adapt to the impacts of climate change; benefiting over 458,371 in 91,674 households. Catalytic linkages are foreseen between these two projects, especially concerning climate change related awareness raising, training and outreach. The primary stakeholder groups of the two projects complement each other in Mangochi and selected parts of Machinga districts.

**16. UNDP-GEF LDCF project “Strengthening climate information and early warning systems in Eastern and Southern Africa for climate resilient development and adaptation to climate change – Malawi”.** The project aims to strengthen the capacity of the Department of Climate Change and Meteorological Services to monitor extreme weather and climate change, and for integrating sector-specific climate information into development plans and early warning systems. Linkages relevant to the fisheries sector will be established.

**17. UNDP-GEF project “Implementing Urgent Adaptation Priorities Through Strengthened Decentralized and National Development Plans”.** This project aims to strengthen consideration of climate change adaptation needs in decentralised and national development plans: as such, the team of the project proposed here will pay particular attention to coordination and realizing synergies in relation to the proposed incidence work in national and decentralized policy and planning frameworks.

## **B. ADDITIONAL INFORMATION NOT ADDRESSED AT PIF STAGE:**

### **B.1. Describe how the stakeholders will be engaged in project implementation:**

18. The principal institutional stakeholder of the project will be DoF, which, in addition to acting as project executing partner, will fill and cofinance the posts of National Project Coordinator and around half of the technical posts of the PMU, as well as all of the field staff. This arrangement will serve to maximize ownership and capacity building in the institution, which is the lead actor in the fisheries sector. DoF will also provide the National Project Director, and will chair the Project Steering Committee.

19. The engagement of District authorities (which have assumed an increased role under recent decentralization policies and legislation) will similarly be furthered by its hosting the PMU office at Mangochi.

20. The project will place strong emphasis on promoting participation and engagement by local stakeholders at community level, in accordance with a preliminary participation developed during the PPG phase, which will be further detailed during project implementation. Its actions under Component 3, in particular, will focus on the promotion of co-management of fisheries and the strengthening of community-based governance of fisheries and other natural resources. This will build upon earlier investments in participatory fisheries management, and will pay particular attention to promoting local ownership of governance structures such as Beach Village Communities, which in the past have been regarded by some stakeholder sectors as Government initiatives. Norms for fisheries management (including provisions for example for permitted off-take levels and fishing gear), and plans for ecosystem management and restoration, and proposed investments in no-take areas and seine-prevention objects, will all be defined with the full participation of local stakeholders.

21. Specific instances in which the project will promote stakeholder engagement and participation include the following:

- Output 1.1.3. Climate and environmental monitoring and early warning (EWS) systems: the monitoring systems and EWS to be supported by this project will build on these baseline investments, but will be more specific to the case of fisheries, aquatic ecosystems and fishing communities on and around Lake Malombe, and will be carried out with the participation of the BVCs.
- Output 1.1.5. Mechanisms for dissemination and input of knowledge into adaptive management of fisheries and other natural resources: the participatory resource management and restoration plans proposed under Component 3 will set out the management strategies that will need to be guided in an adaptive manner by the information flows generated through the above Outputs. With the participation of relevant institutional and local stakeholders, each of the management strategies proposed in the plans will be reviewed and the key stakeholders responsible for each, together with the types of information they will need, will be identified, and they will be characterised in terms of their ability to access and manage information.
- Output 3.1.1: Multi-stakeholder co-management structures: with the participation and subject to the approval of local stakeholders, the project will define a stakeholder participation plan that will set out principles and specific strategies for ensuring the effective and equitable participation of all relevant stakeholders in the governance structures that will be strengthened by the project. This would include the setting up of a joint coordination and information sharing platform for cross-sectoral planning and extension, to address issues such as upstream resource governance i.e. on forestry practices and agriculture. This would include the initiation of exchange platforms with project partners, including FISH and other NGOs.
- Output 3.1.2: Participatory resource management plan(s): This zoning and management planning will be based on a combination of sound science, an integrated understanding of the interactions between biological, productive and social parameters (applying an integrated sustainable livelihoods approach and taking into account considerations of gender equity, poverty reduction and resilience), and the views and priorities of the diverse local stakeholder groups who are directly or indirectly associated with the resources of the lake. The plan will be developed in a participatory and collaborative manner between local communities and entities of district and central level Government (including, but not limited to, the DoF), and they will be subject to validation and approval by all of these stakeholders.
- Output 3.1.3: Norms and regulations for resource co-management: the project will facilitate workshops to define needs for modifications or additions to existing norms and regulations in order to allow the provisions of the management plan to be implemented. Full stakeholder participation in this process will be essential in order to ensure buy-in to the norms and regulations in local communities, and therefore their support to their application, as well as to screen for and minimise the risk of negative impacts on local people's livelihoods.
- Output 3.1.4: Enforcement mechanisms for resource co-management: the by-laws and other norms and regulations defined as Output 3.1.3 will be underpinned by effective enforcement, which will feature shared responsibilities and participation of local communities and Government entities (especially DoF). The project will negotiate sustainable options for enabling community surveillance, in close collaboration with the relevant authorities (including DoF, police, marine police, park authorities and the judiciary). The organization of community surveillance teams to support compliance will be assisted by DoF extension officers. The project will assist in negotiating collaboration between neighbouring BVCs and form clusters, associations or federations of BVCs.
- Output 3.2.1: A verified and updated restoration plan for Lake Malombe: following the same process as proposed above in relation to the overall participatory resource management plan for the lake, the restoration plan will be developed with the full participation of local stakeholders, authorities from district level and relevant Government entities (especially DoF), taking into

account technical information on resource status, fisheries biology and lessons learnt generated through Component 1, and resulting in the definition of management and restoration practices, their spatial zoning and responsibilities for their implementation.

- Output 3.3.1: Aquaculture resilience plan developed, implemented and underpinned through on-going research and impact tracking programme: The plan will be prepared with the participation of all relevant stakeholders: the project will help to organize and facilitate a structured series of workshops, in which stakeholders (including fish farmers, representatives of community organizations, private sector actors, NGOs, district authorities and DoF) will review the current status of aquaculture in the area in terms of its potential, challenges and vulnerability to climate change. On the basis of these analyses, the participants will generate proposals for the climate-proofing of the sub-sector.
- Output 3.3.4: Impact tracking programme. The sustainability and local ownership of the tracking programme will depend on its indicators being relevant to the needs and interests of the stakeholders who will ultimately be responsible for sustaining it in the long term. The indicators, together with the mechanisms and responsibilities for their measurement and for the input of the results in support of the adaptive implementation of the plan, will therefore be developed in a participatory manner with facilitation and advisory support provided by the project.
- Output 3.4.1: Participatory learning and extension programmes and demonstrations: in the same way as described above with the climate-proofing of aquaculture, the project will prioritise a participatory action learning approach to the development and dissemination of diversified farming systems. Successful farms will subsequently have the potential to be used as resources for the demonstration of the systems to other stakeholders.

**B. 2. Describe the socioeconomic benefits to be delivered by the Project at the national and local levels, including consideration of gender dimensions:**

22. The strategic approach of the project recognizes the links between the generation of socioeconomic and adaptation benefits, and ecosystem resilience, on the basis of the following considerations:

- The actors with least ability to adapt to climate change through switching livelihood support options are the poorest. Those with greater access to economic resources, who currently own most of the factors of production in the form of fishing boats and gear, are considered to have a relatively high capability to adapt by investing their capital in alternative businesses. There is therefore a need to ensure that adaptation strategies are formulated in such a way as to maximise their benefits for the poor, both through improvements to their own production systems and through the generation of employment opportunities and other economic multiplier effects as a result of improvements to production systems managed by the less poor.
- There are already a number of aquaculture ponds in the project area, and aquaculture has some potential to contribute to the income and food needs of local stakeholders. A number of factors, however, including poorly developed value chains, limited technical and organisational capacities, high capital requirements and the risk of price fluctuations due to the availability of fish from the large wild fisheries of Lakes Malombe and Malawi, limit the potential of aquaculture as a reliable alternative livelihood strategy capable of generating significant resilience benefits for the poor. These constraints are beyond the scope of this project alone to address effectively. The project will not therefore aim to increase the scale of aquaculture in the area, but rather will focus on supporting the “climate-proofing” aquaculture and on integrating it into diverse and resilient farming/livelihood systems, accessible to the poor.

23. Taking into account these considerations, the project will aim to create a situation in which:

- 1) **Capture fisheries on Lake Malombe are restored and “climate-proofed”**, allowing them to generate livelihood benefits for local people in the form of income and food security, despite the

BAU stresses of overfishing and the added stresses to ecosystems and livelihoods that are expected as a result of climate change;

- 2) **Local people (especially the poor) have access to resilient options for meeting income and food security needs**, in order to buffer their livelihoods against the potential impacts of climate change and BAU pressures on their existing livelihood support strategies.

24. The principal contribution of the project to the socioeconomic wellbeing of the target population will be in terms of increases in their resilience to the impacts of climate change. Specifically, the project will increase the resilience of the livelihoods of the members of 29 fishing villages (corresponding to Beach Village Communities). This will be expressed in reductions in men and women’s perceptions of their vulnerability and risk exposure, from “extreme” to “medium”, in accordance with AMAT indicator 1.2.14: the precise definitions of these categories will be confirmed at project start in accordance considerations of relevance to local socioeconomic, cultural and biophysical contexts.

25. The project will furthermore ensure that the quantity and quality of family food consumption (including the poorest, more vulnerable and female-headed households) will be maintained at or above baseline levels, reflecting the fact that livelihood and economic resilience measures (which may require increased dedication of time, land and financial resources) will not be carried out at the expense of food security.

26. In addition, the application of viable and profitable adaptation measures promoted by the project will result in a net increase of 10% in average household income, including the poorest, more vulnerable and female-headed households.

27. The promotion of alternative income sources, particularly from locally-appropriate forms of aquaculture, will, in addition to generating direct socioeconomic benefits, serve to reduce pressures on capture fisheries in Lake Malombe itself and thereby facilitate the recovery of the status and resilience of fish populations and aquatic ecosystems there.

28. The restoration activities foreseen under Output 3.2.2 will also generate direct financial benefits to members of the target communities in the form of payments for daily labour: these benefits will serve to contribute to the awareness among community members of the importance of the ecosystem and its

29. Project design has incorporated gender considerations through gender-specific vulnerability assessment and capacity development planning, as summarized below:

EXISTING GAPS/ ISSUES	PRIORITY ISSUES/GAPS	HOW TO ADDRESS THE ISSUES
<p><b>Sociological and cultural:</b></p> <ul style="list-style-type: none"> <li>- Traditions and customs e.g. patriarchal systems</li> <li>- Land tenure systems that favour men as land rights are governed by institutions that are culturally and socially determined hence affecting fish farming</li> </ul> <p><b>Legal and legislative:</b></p> <ul style="list-style-type: none"> <li>- Absence or non application of laws</li> <li>- Dichotomy between laws and customs</li> <li>- Laws that discriminate against women</li> </ul>	<ul style="list-style-type: none"> <li>- Social protection for women</li> <li>- Improving trade policies to take care of women’s needs</li> <li>- Female-Headed households to be given special attention when developing safety nets</li> <li>- Improve access to information on fish and markets</li> <li>- Improve access to credit facilities</li> <li>- Civic education on women empowerment</li> </ul>	<ul style="list-style-type: none"> <li>- Analysis of gender specific impacts and protection measures related to floods, droughts, diseases, and other environmental changes and disasters</li> <li>- Develop strategies to enhance women’s access to and control over natural resources, in order to reduce poverty, protect environmental resources, and ensure that women and poor communities can better cope with climate change</li> <li>- Identify women’s particular skills and capacities that lend themselves to mitigation and adaptation in climate change</li> <li>- Include women in decision – making of climate change adaptation at all levels</li> <li>- Conduct gender analysis to determine the roles and responsibilities of various players in fisheries</li> </ul>

<p><b>Political:</b></p> <ul style="list-style-type: none"> <li>- Low status of women in society</li> <li>- Decision making reserved for men</li> </ul> <p><b>Economic</b></p> <ul style="list-style-type: none"> <li>- Difficulties in accessing means of production for women</li> <li>- Limited income for women</li> <li>- Limited access to education and training</li> <li>- Inadequate information on women's rights</li> <li>- Shortage of reliable and sex disaggregated data both qualitative and quantitative</li> </ul> <p><b>Health</b></p> <ul style="list-style-type: none"> <li>- HIV and AIDS have significant impacts on land tenure systems including inheritance rights, shifts in ownership of tenure and distress sales.</li> <li>- Increase in the tradition custom of property grabbing for both men and women</li> <li>- Increased vulnerability and increased food insecurity among women headed households and girls</li> </ul>	<ul style="list-style-type: none"> <li>- Effective communication strategies which are context specific</li> <li>- Promotion of Behavior Change Communication (BCC) strategies at all levels</li> </ul>	<ul style="list-style-type: none"> <li>- To determine how individuals, households and others make a living and access to essential resources and services</li> <li>- Increase awareness on property rights among men and women not only promoting access to land and inputs</li> <li>- Adaptation of the gender concept in the local context</li> <li>- Enhanced investment in research</li> <li>- Revise/adopt laws aiming to improve women's status</li> <li>- Repackaging and dissemination of adopted laws</li> <li>- Setting up community watch-dogs</li> <li>- Increasing development of female leadership</li> <li>- Increased involvement of women in decision making bodies and structures</li> <li>- Enhance participation of women in training courses and organisational structures</li> <li>- Increased attention to girls education</li> <li>- Improve documentation</li> <li>- Undertake cross sectoral research at different levels (local, district and national) for networking and resource mobilization</li> <li>- More research to provide data that allows to better understand the situation on the ground</li> <li>- Enhance advocacy campaigns</li> <li>- Protect women and girls from Gender Based Violence (GBV)</li> <li>- Promote equal access to women and girls to information on HIV and AIDS</li> </ul>
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**B.3 Explain how cost-effectiveness is reflected in the project design:**

30. Cost-effectiveness will be ensured through the following approaches:

- Close involvement of DoF staff in the PMU, which will limit the need for LDCF expenditure on salaries (in addition to its primary objective, which is to promote national ownership and capacity development);
- Close association and complementarity with the USAID-funded FISH project (a major source of co-financing for the project), which will allow LDCF resources to be focused, in geographic and thematic terms, in a cost-effective manner. The LDCF project will address aquaculture, and its climate-proofing and integration into resilient livelihood support systems, whereas the main focus of FISH will be on capture fisheries; and the LDCF project will have a more specific focus on promoting the status and climate resilience of chambo fisheries in Lake Malombe, given the high value of this species and its corresponding particular potential, if fisheries are restored, to contribute to the livelihoods of vulnerable local communities, while FISH will have a broader focus in terms of species;
- Emphasis on participatory co-management and governance, which will limit the need for capital and recurrent investment of Government resources due to the expected levels of buy-in and participation by local stakeholders.

31. The selected strategies for fisheries management and aquaculture were also identified as being more cost effective than the technical alternatives considered.

32. Cage or pen aquaculture was considered as a means to generate replacement food from the declining fishery. However, the performance to date of aquaculture across Malawi has been rather poor, and the resources needed to get it going would render it a costlier alternative to effective fishery and environmental management of the lake and fishery habitat. Pen culture would in fact hasten the decline of the fishery by impacting nearshore shallow water nursing grounds.

33. The project will explore resilient aquaculture as part of diversified farm production, but the expectation is that this will in no way replace the importance of the lake in providing fish to the people of the riparian communities who are dependent upon this. It may however provide some low risk supplemental income to families.

34. In the same vein, the replacement of fish with small livestock production would depend on their being feed resources available, and that the livestock would be more resilient than the fishery. In fact livestock in smallholdings is often very vulnerable to disease, drought and lack of adequate feeds, so it would also be unlikely to function as a full replacement for lost fishery services.

35. On the basis of the above comparisons, the conclusion is that effective management of the fishery is the most cost effective and sustainable approach.

### *Sustainability*

36. Environmental sustainability is a central focus of the project, and will be ensured through the application of the Ecosystem Approach to Fisheries (EAF). This approach considers not only the sustainability of the fish populations themselves (through the strengthening of evidence-based planning and governance of offtake levels and gear) but also the ecological integrity of the ecosystem as a whole, including the restoration of key nurseries and habitat areas, the designation of no-take areas to allow population recovery, and the addressing of land-based threats such as pollution and sedimentation. Another key element of sustainability will be the focus of the project on developing capacities for adaptive management, through the effective flow of reliable and up to date information regarding the status of the ecosystem and its components into decision-making: this focus is particularly important in the case of this shallow lake, which is subject to wide seasonal and inter-annual fluctuations of water levels and quality.

37. The promotion of solar fish driers will reduce the risk of increases in fish offtake due to population recovery resulting in increases in deforestation to supply needs for fuelwood for the currently-used driers and smokers.

38. The sustainability of the management of water resources will be furthered through the integration, where possible, of fish farming into agricultural systems and infrastructure projects. This will allow stakeholders to take advantage of existing water management systems, such as irrigation reservoirs, for fish farming; while water from fish ponds will be available for irrigation use on farm, alongside other water management measures such as grey water filters and agroforestry systems.

39. Social sustainability will be ensured as follows:

- The strengthening of multi-stakeholder co-management structures as the cornerstone for sustainable fisheries and ecosystem management, allowing the needs and concerns of all relevant stakeholder groups to be aired and considered, including possible obstacles to social sustainability.
- The application of a highly participatory approach to the planning of ecosystem and fisheries management, and restoration activities, as proposed under Outputs 3.1.2 and 3.2.2, in order to ensure that they make provisions for issues with potential implications for social sustainability, and are “owned” by all major stakeholder groups.
- Participatory development and collaborative application of norms and regulations on resource management, in order to ensure that they receive social backing.

- Participatory approaches to the development of technologies and management strategies, featuring leadership by the farmers/fishers themselves, or at least their full involvement in the processes. This will maximize the probability of compatibility with other elements of stakeholders’ complex livelihood support strategies, as well as with cultural norms, and will ensure their ownership of the practices. A focus on experimental “action learning” will furthermore allow stakeholders to adapt the practices in the future, thereby ensuring their continued relevance and sustainability in the face of changing circumstances.
- Economic sustainability will be ensured by developing technical and business-management capacities among aquaculture producers, under Output 3.3.3: this will include aspects of post-harvest care, marketing, producer clustering (in order to improve access to affordable inputs and services, and markets) and technical support aimed at optimising the efficiency of input use (for example by reducing mortality rates and therefore cost of fry, and improving feed inputs).

**Potential for scaling up**

40. Overall, project activities will be scaled up through integration with the entire DoF system and staff, as well as with national development programmes run by NGOs, government and partner agencies. By focusing on food security we can ensure that the integration of climate resilient fisheries investments in the future will broaden food security opportunities in Malawi. A natural resource, traditionally a significant contributor to Malawian diets, will be promoted to a more prominent position in national food security policies in the future. Focusing on technical capacity support at this stage is a critical foundation for future up-scaling of the work.

41. Up-scaling of lessons learned to a regional level can be envisaged, informing climate resilience building in the fisheries sector throughout the African Great Lakes region, and especially amongst the three countries that border Lake Malawi, namely Malawi, Mozambique and Tanzania.

**C. DESCRIBE THE BUDGETED M&E PLAN**

42. Monitoring and evaluation of progress in achieving project results and objectives will be done based on the targets and indicators established in the Project Results Framework (Annex A). The project Monitoring and Evaluation Plan has been budgeted at USD 108,000 (see below). Monitoring and evaluation activities will follow FAO and GEF monitoring and evaluation policies and guidelines. The monitoring and evaluation system will also facilitate learning and replication of project results and lessons in relation to integrated management of natural resources.

**Summary of main monitoring and evaluation activities**

Type of M&E Activity	Responsible Parties	Time-frame	Indicative budget
Inception Workshop	PMU, supported by the FAO LTO, BH, and the FAO GEF Coordination Unit	Within two months of project start up	National workshop \$5,000, local workshops \$5,000
Project Inception Report	PMU, cleared by FAO LTO, BH, and the FAO GEF Coordination Unit	Immediately after workshop	\$102,857 of CTA salary assigned to Component 4
Project day to day monitoring	PMU, participating executing partners and other relevant institutions.	Continually	
Supervision visits and rating of progress in PPRs and PIRs	PMU, FAO Malawi, FAO LTO and FAO GEF Coordination Unit	Annual or as required	\$ 60,000 to NPC salary assigned to Component 4
Project Progress Reports	BH with support from PMU and Project Coordinator with inputs from other partners	Six-monthly	\$180,000 of M&E specialist salary assigned to

Type of M&E Activity	Responsible Parties	Time-frame	Indicative budget
Project Implementation Review report	BH with inputs provided by the CTA and Project Coordinator.  PIRs cleared and submitted by the FAO GEF Coordination Unit to the GEF Secretariat	Annual	Component 4  FAO costs covered by agency fee
Co-financing Reports	PMU	Annual	
Technical reports	PMU, /LTO	As appropriate	
Terminal Report	PMU, BH, LTO, TSCR report Unit	At least two months before the end date of the GCP Agreement	
Mid-term Evaluation/Review	External Consultant, in consultation with the project team including the FAO GEF Coordination Unit, the LTO, and other partners	At mid-point of project implementation	\$40,000
Final evaluation	External Consultant, FAO independent Evaluation Office in consultation with the project team including the FAO GEF Coordination Unit, the LTO, and other partners	At the end of project implementation	\$50,000
<b>Terminal Report</b>	PMU, LTO, TCSR Report Unit	At least two months before the end date of the Execution Agreement	\$8,000
<b>Total</b>			<b>\$108,000 (excl. salaries indicated above)</b>

43. For full-sized projects, an independent Mid-Term Review/Evaluation will be undertaken at project mid-term to review progress and effectiveness of implementation in terms of achieving the project objectives, outcomes and outputs. Mid-term Reviews are encouraged for medium sized projects. Findings and recommendations of this review/evaluation will be instrumental for bringing improvement in the overall project design and execution strategy for the remaining period of the project's term. FAO will arrange for the mid-term review/evaluation in consultation with the project partners. The evaluation will, inter alia:

- review the effectiveness, efficiency and timeliness of project implementation;
- analyze effectiveness of partnership arrangements;
- identify issues requiring decisions and remedial actions;
- propose any mid-course corrections and/or adjustments to the implementation strategy as necessary; and
- highlight technical achievements and lessons learned derived from project design, implementation and management.

44. It is recommended that an independent Final Evaluation (FE) be carried out three months prior to the terminal review meeting of the project partners. The FE will aim to identify the project impacts and sustainability of project results and the degree of achievement of long-term results. This evaluation will



also have the purpose of indicating future actions needed to sustain project results and disseminate products and best-practices within the country and to neighbouring countries.

**PART III: APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINT(S) AND GEF AGENCY(IES)**

- A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT(S) ON BEHALF OF THE GOVERNMENT(S):** (Please attach the [Operational Focal Point endorsement letter\(s\)](#) with this template. For SGP, use this [OFP endorsement letter](#)).

NAME	POSITION	MINISTRY	DATE (MM/dd/yyyy)
Dr Aloysius M. Kamperewera	Director and OFP	ENVIRONMENTAL AFFAIRS	12/18/2012

**B. GEF AGENCY(IES) CERTIFICATION**

This request has been prepared in accordance with GEF/LDCF/SCCF/NPIF policies and procedures and meets the GEF/LDCF/SCCF/NPIF criteria for CEO endorsement/approval of project.					
Agency Coordinator, Agency Name	Signature	Date (Month, day, year)	Project Contact Person	Telephone	Email Address
Gustavo Merino Director, Investment Centre Division Technical Cooperation and Programme Management. FAO Viale delle Terme di Caracalla 00153, Rome, Italy		12 August 2016	Ms Florence Marie Rolle FAO Representative Malawi	+265 1 773 925	Florence.Rolle@fao.org
Jeffrey Griffin Senior Coordinator, FAO GEF Coordination Unit. Investment Centre Division.				+3906 57055680	<a href="mailto:GEF-Coordination-Unit@fao.org">GEF-Coordination-Unit@fao.org</a>

## ANNEX A:PROJECT RESULTS FRAMEWORK

Results Chain	Indicators	Baseline	Mid-term targets	End of Project Target	Means of Verification and Responsible Entity	Assumptions
<b>Project Objective:</b> To improve the resilience of fishing communities around Lake Malombe to the effects of climate change	<b>Indicator O.1:</b> <b>Vulnerability and risk perception index score</b> , disaggregated by gender (1. Extreme, 2. High, 3. Medium, 4. Low or 5. No Vulnerability) (AMAT indicator 1.2.14) <i>Objectively verifiable definitions and survey methodology to be developed and applied at project start</i>	Initial survey from two villages during PPG phase suggests rating of “1. Extreme Vulnerability” for both men and women.  <i>Full baseline survey to be carried out at project start</i>	“2. High” vulnerability and risk perceptions for both men and women in all sites	“3. Medium” vulnerability and risk perceptions for both men and women in all sites	Gender-sensitive village level surveys by the project (definitions and methodologies to be developed at project start)	Complementary livelihood support elements (e.g. cash cropping and off-farm employment), not directly addressed by the project, continue to be viable  Climatic trends and natural disasters remain within the coping range on the basis of which the resilience strategies are designed
	<b>Indicator O.2:</b> <b>% increase in income generation</b> in targeted area due to adaptation measures (AMAT indicator 1.2.10)	0%	10% increase in average household income, including poorest, more vulnerable and female-headed households due to adaptation measures	10% increase in average household income, including poorest, more vulnerable and female-headed households due to adaptation measures	Gender-sensitive village level surveys by the project (definitions and methodologies to be developed at project start)	Political and social conditions remain stable
	<b>Indicator O.3:</b> <b>Food consumption</b> of target households (including poorest, more vulnerable and female-headed households), in terms of total quantities, protein content and intra-family distribution	<i>Baseline survey to be carried out at project start</i>	Food consumption in all households in target communities (including poorest, more vulnerable and female-headed households) maintained at baseline levels	Food consumption in all households in target communities (including poorest, more vulnerable and female-headed households) maintained at baseline levels	Gender-sensitive village level surveys by the project (definitions and methodologies to be developed at project start)	
<b>Component 1: Strengthening access to information and knowledge regarding climate change and its implications.</b>						
<b>Outcome 1.1:</b> Enhanced access to and use of information on climate trends, extreme events and resource status, necessary for the formulation and implementation of effective and timely resilience and management measures	<b>Outcome Indicator 1.1.1:</b> <b>Numbers of key actors with access to relevant and understandable information</b> required for the formulation and implementation of resilience and management measures, on: <ul style="list-style-type: none"> <li>- Climate trends and vulnerability levels</li> <li>- Social conditions and social implications of vulnerability</li> <li>- Trends in fisheries and related natural resources</li> </ul>	<b>PPG survey results suggest that local communities have basic understanding of climate change concepts gained through radio, print media and community meetings.</b>  <b>Baseline survey to be carried out at project start</b>	<b>Actors with access to information:</b>  <b>Nationwide:</b> <ul style="list-style-type: none"> <li>- 40% of DoF staff in 28 Districts</li> </ul> <b>In project area:</b> <ul style="list-style-type: none"> <li>- 40% of staff in Magochi district authority</li> <li>- Leaders of 2 Traditional Authorities (TA)</li> </ul>	<b>Actors with access to information:</b>  <b>Nationwide:</b> <ul style="list-style-type: none"> <li>- 80% of DoF staff in 28 Districts</li> <li>-</li> </ul> <b>In project area:</b> <ul style="list-style-type: none"> <li>- 80% of staff in Magochi district authority</li> </ul>	Interviews with actors	Continued receptivity on the part of stakeholders, including policy makers, to receiving and responding to information inputs  Continued commitment to collaboration between stakeholders (particularly GoM and

Results Chain	Indicators	Baseline	Mid-term targets	End of Project Target	Means of Verification and Responsible Entity	Assumptions
	- Resilience options and their effectiveness		- Leaders of 15 BVCs	- Leaders of 3 Traditional Authorities (TA) - Leaders of 29 BVCs -		research institutions) in information generation and management
	<u>Outcome Indicator 1.1.2:</u> <b>Numbers and types of key decision-making, planning and regulatory instruments</b> in the project area, related to CC resilience in fishing communities that are based on reliable information on the above parameters	<b>No significant incorporation of reliable information</b>	50% of: - Limits on fishing practices and gear - District and community level development plans and strategies in the project area - Resilience and restoration plans and strategies (both aquatic and terrestrial)	- All limits on fishing practices and gear - All district and community level development plans and strategies in the project area - All resilience and restoration plans and strategies (both aquatic and terrestrial)	Interviews with entities responsible Review of instruments	
<b>Outputs:</b> 1.1.1: Detailed Vulnerability and Disaster Risk Assessments (VDRA) of 47 fishing communities around Lake Malombe 1.1.2: Information resources on ecological parameters determining management and resilience options in and around Lake Malombe 1.1.3: Climate and environmental monitoring and early warning (EWS) systems 1.1.4: Strengthened fisheries monitoring system 1.1.5: Mechanisms for dissemination and use of knowledge in adaptive management						
<b>Component 2: Creating an enabling environment for the promotion of climate change resilience among fishing communities</b>						
<b>Outcome 2.1:</b> Climate change resilience mainstreamed into key policy and planning instruments of relevance to fisheries and fishing communities	<u>Outcome Indicator 2.1.1:</u> <b>Degree of reference</b> to climate change considerations as related to fisheries in key policy and planning instruments	- National Climate Change Policy and Disaster Risk Management Policy are currently in draft form - MGDS and NAPA are predominantly agriculture-oriented - ASWAp does not make specific reference of CC issues of relevance to fisheries	- Inclusion of specific reference to CC issues in the fisheries sector in the National Climate Change Policy and Disaster Risk Management Policy, and reflected in the mechanisms charged with their oversight. - Increased emphasis on the fisheries sector in the provisions related to	- Inclusion of specific reference to CC issues in the fisheries sector in the National Climate Change Policy and Disaster Risk Management Policy, and reflected in the mechanisms charged with their oversight. - Increased emphasis on the fisheries sector in the provisions related to	Review of policy and planning instruments	Continued receptivity on the part of stakeholders, including policy makers, to receiving and responding to information inputs  Continued commitment to collaboration between stakeholders (particularly GoM and research institutions)

Results Chain	Indicators	Baseline	Mid-term targets	End of Project Target	Means of Verification and Responsible Entity	Assumptions
			CC in the MGDS and NAPA. - Improved reflection of CC issues of relevance to fisheries in ASWAp implementation.	CC in the MGDS and NAPA. - Improved reflection of CC issues of relevance to fisheries in ASWAp implementation.		in information generation and management  Existence of sufficient budgetary flexibility to allow provisions to be made for climate resilience
	<u>Outcome Indicator 2.1.2:</u> <b>Degree of consideration of climate resilience</b> in local commune plans and district level plans and budgets  <i>Relates to AMAT indicator 1.1.1.1: Development frameworks (local/district level) that include specific budgets for adaptation actions</i>	No integration of fisheries-related) adaptation action in Mangochi district plan or local level development plans, or Area Development Plans of traditional authorities (TAs) or village clusters (VDCs)	A detailed strategy of how to integrate with ongoing local level development and Area Development Plans in place and commitments from relevant political leadership pledged	Climate resilience provided for explicitly, with corresponding budget allocation, in: - 1 District Development Plan - Area Development Plans of 3 TAs (Chimwala, Chowe, Mponda) - Village Development Plans of 45 VDCs	Review of plans and budget allocations	
	<b>Outputs:</b> 2.1.1. Think tank on climate change in the fisheries and aquaculture sector with an integrated vision and incorporating results of CC and fisheries monitoring systems 2.1.2. Policy review document 2.1.3. A policy influencing strategy for mainstreaming climate resilient fisheries and aquaculture, developed and implemented. 2.1.4 Policy guidance materials 2.1.5. Guidelines/Code of Conduct for responsible CC-resilient aquaculture developments in riparian areas in Malawi					
<b>Outcome 2.2</b> Strengthened capacities of fisheries professionals and other relevant stakeholders to address climate resilience building in fisheries sector	<u>Outcome Indicator 2.2.1:</u> <b>Number of members of targeted institutions</b> applying increased knowledge and awareness in support of resilience measures (AMAT indicator 2.2.1.)  Target institutions: - DoF HQ - District Fisheries Office in Mangochi - 4 DoF sub-stations - 5 other districts along Lake Malawi	No institution is fully aware of climate risks to the fisheries sector and none have the capacity to deal with these risks.  <i>Baseline to be developed through Knowledge, Attitudes and Practice (KAP) survey at project start</i>	25% of members of all target institutions have increased KAP score  <i>Target to be confirmed once KAP methodology and baseline are developed at project start.</i>	50% of members of all target institutions have increased KAP score -  <i>Target to be confirmed once KAP methodology and baseline are developed at project start.</i>	<b>KAP surveys</b>	Availability of staff for capacity development activities  Adequate baseline educational levels to allow effective participation in capacity development  Existence of sufficient budgetary flexibility

Results Chain	Indicators	Baseline	Mid-term targets	End of Project Target	Means of Verification and Responsible Entity	Assumptions
	<ul style="list-style-type: none"> <li>- 2 Aquaculture Research Stations</li> <li>- Fisheries college, Mangochi</li> <li>- 2 Fisheries Research Stations: Monkey Bay, Senga Bay)</li> <li>- 27 BVCs, 47 Villages, 3 Tas and Mangochi District</li> </ul>					to allow for increases in assignments to DoF
	<p><b>Outcome Indicator 2.2.2:</b>  <b>Levels of recurrent budget assigned to and executed</b> by district fisheries offices (cost centres 052 Mangochi, 053 Div South, 054 Fisheries North and 055 Regional Centre ) in accordance with provisions of resource management and restoration plans</p>	<p>In 2013/14 FY:</p> <ul style="list-style-type: none"> <li>- K56,502,845 (USD81,423) approved</li> <li>- K27,570,103 (USD39,730) disbursed</li> <li>- K25,097,695 (USD36,167) spent</li> </ul>	<ul style="list-style-type: none"> <li>- 15% increase in approved amount (to USD93,636)</li> <li>- 20% increase in disbursed amount (to USD47,675)</li> <li>- 25% increase in spent amount (to USD45,208)</li> </ul>	<ul style="list-style-type: none"> <li>- 30% increase in approved amount (to USD105,849)</li> <li>- 40% increase in disbursed amount (to USD55,621)</li> <li>- 50% increase in spent amount (to USD54,250)</li> </ul>	Budgetary records of DoF	Existence of institutional culture, systems and baseline capacities within DoF allowing capacities to be applied effectively and budgetary execution to be improved.
	<p><b>Outputs:</b></p> <p>2.2.1 Capacity development programme for staff of key institutions in relation to climate change preparedness and resilience building</p> <p>2.2.2 Improved physical capacities for DoF to sustain the resilience strategies</p>					
<p><b>Outcome 2.3</b>  Strengthened awareness of climate change issues and responses of relevance to the fisheries sector and fishing communities</p>	<p><b>Outcome Indicator 2.3.1:</b>  <b>Numbers of people in key fisheries value chain target groups aware of fisheries resilience issues</b></p>	<p><b>To be determined through baseline surveys</b></p>	<ul style="list-style-type: none"> <li>- 25% of supermarket consumers purchasing fish from Lake Malombe</li> <li>- 30% of traders in fish from Lake Malombe</li> <li>- 40% of fishers on Lake Malombe</li> </ul>	<ul style="list-style-type: none"> <li>- 50% of supermarket consumers purchasing fish from Lake Malombe</li> <li>- 60% of traders in fish from Lake Malombe</li> <li>- 75% of fishers on Lake Malombe</li> </ul>	Awareness surveys among supermarket consumers, traders and fishers in Lake Malombe	Receptivity of actors to messages regarding fisheries resilience
	<p><b>Outputs:</b></p> <p>2.3.1 National “Chambo” campaign, supporting behaviour change and motivation, rolled out</p>					
<p><b>Component 3:</b> Strengthening capacities at local level to increase the resilience of fishing communities to climate change</p>						
<p><b>Outcome 3.1:</b> Adaptive co-management and resource governance systems in support of climate-resilient capture fisheries</p>	<p><b>Outcome Indicator 3.1.1:</b>  <b>Numbers and types of stakeholders</b> considering that they are satisfactorily represented in co-management structures</p>	<p><b>To be determined through baseline surveys</b></p>	<p><b>50% of people (men and women) in all major stakeholder groups</b></p>	<p><b>80% of people (men and women) in all major stakeholder groups</b></p>	Reviews of attendance sheets and minutes in meetings, stakeholder surveys, focus groups	Social and political conditions remain stable and peaceful
	<p><b>Outcome Indicator 3.1.2:</b>  <b>Percentage implementation of provisions and targets of</b></p>	N/A	<p><b>30% implementation of resource management plans</b></p>	<p><b>70% implementation of resource management plans</b></p>	Physical inspections of implementation, focus groups with stakeholders	Openness among stakeholders to collaboration in governance systems

Results Chain	Indicators	Baseline	Mid-term targets	End of Project Target	Means of Verification and Responsible Entity	Assumptions
	participatory resource management plan(s)					
	<u>Outcome Indicator 3.1.3:</u> Percentage of fishers complying with norms and regulations for resource co-management	N/A	40% of all categories of fishers	80% of all categories of fishers	Inspections/monitoring of gear and fishing practices	
	<u>Outcome Indicator 3.1.4:</u> Degree of satisfaction among different stakeholder groups with co-management and governance frameworks	To be determined through baseline surveys	40% in all stakeholder groups are satisfied	75% in all stakeholder groups are satisfied	Stakeholder surveys	
	<u>Output Indicator 3.1.5:</u> Area excluded from fishing	80ha in existing National Park (100m from land)	3,000ha additional no-take area	6,000ha additional no-take area	Reports of local governance structures	
	<b>Outputs:</b> 3.1.1: Multi-stakeholder co-management structures 3.1.2: Participatory resource management plan(s) 3.1.3: Norms and regulations for resource co-management 3.1.4: Enforcement mechanisms for resource co-management					
<b>Outcome 3.2:</b> Fish stocks and habitats restored through EAFA approaches	<u>Outcome Indicator 3.2.1:</u> Area of EAFA -based Chambo nursery habitat rehabilitated	0 ha	ha	10ha covered by seine prevention objects (SPOs) Planting of 40ha of aquatic vegetation	Project (GIS) mapping and monitoring exercises under outcome 3 Responsible: DoF – Research Unit Monkey Bay	Continued low levels of social conflict
	<u>Outcome Indicator 3.2.2:</u> Representation of higher value species (chambo) in populations	Approximately 2% is chambo	5%	9% of catch is chambo	DoF population monitoring programme under Activity 3.2.3.4	
	<u>Outcome Indicator 3.2.3:</u> Proportion of kasawala (immature chambo i.e. less than 15 cm) in monitoring catches (as an indicator of rebuilding the chambo stocks)	Approximately 2%	20%	50%	DoF population monitoring programme under Activity 3.2.3.4	
	<b>Outputs:</b> 3.2.1: A verified and updated restoration plan for Lake Malombe, including risk assessment 3.2.2: Restoration programme 3.2.3: Restocking programme for healthy native chambo					

Results Chain	Indicators	Baseline	Mid-term targets	End of Project Target	Means of Verification and Responsible Entity	Assumptions
<b>Outcome 3.3:</b> Aquaculture is climate-proofed and able to contribute to diverse and resilient livelihood strategies of the most vulnerable sectors of the population	<u>Outcome Indicator 3.3.1:</u> Numbers of aquaculture ponds with climate resilience measures in place (e.g. deepening, reduced seepage measures, location relative to water availability)	None	200 ponds with climate resilience measure	500 ponds with climate resilience measure	Pond inspections	Receptiveness of producers
	<b>Outputs:</b> 3.3.1: Aquaculture resilience plan developed, implemented and underpinned through on-going research and impact tracking programme 3.3.2: Action learning and knowledge generation programme 3.3.3: Capacity development programme for resilient aquaculture 3.3.4: Impact tracking programme					
<b>Outcome 3.4:</b> Local people have access to diverse, pro-poor farming systems as a central element of resilient rural livelihoods	<u>Outcome Indicator 3.4.1:</u> Numbers and total area of farms integrating aquaculture and efficient water management into diverse portfolio of CC resilience measures			1,500 households	Farm inspections	Receptiveness of producers
	<b>Outputs:</b> 3.4.1: Participatory extension programmes 3.4.2 Solar driers					



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

Responses to GEF Secretariat Comments

Question	Comment	Response
6. Is (are) the <b>baseline project(s)</b> , including problem(s) that the baseline project(s) seek/s to address, sufficiently described and based on sound data and assumptions?	The re-submission clarifies how the baseline initiatives relate to the indicative co-financing figures and sources provided in Table C. Section A.1.2 of the PIF also elaborates on the baseline scenario as it relates to hydro-meteorological monitoring and early warning systems in the pilot areas. The PIF provides additional information on baseline investments in food security and rural development; as well as the potential for private sector engagement; and should further explore opportunities for enhanced coordination and additional co-financing by CEO Endorsement.	Additional opportunities for coordination and co-financing have been explored during the PPG phase and information on these is presented in Sections 3.1.2, 3.5.1 and 3.5.2 of the Project Document. Please note that the committed co-financing is now USD12,120,000, compared with the USD4,480,000 indicated in the PIF.
12. Is the <b>project consistent and properly coordinated</b> with other related initiatives in the country or in the region?	The Shire Natural Ecosystems Management Project has been identified among the projects and programs with which coordination and coherence will be sought. Coordination arrangements and complementarities with the initiatives listed in Section A.4 of the PIF should be specified by CEO Endorsement.	Coordination arrangements and complementarities with the initiatives identified in the PIF, and other identified during the PPG phase, are detailed in sections 3.1.2, 3.5.1 and 3.5.2 of the Project Document

Response to USA GEF Council Member Comment

Comment	Response
We encourage the FAO to facilitate coordination and information and knowledge exchange between the project and relevant USAID initiatives, including the forthcoming Fisheries Integration of Society and Habitats (FISH) program. USAID’s FISH program will have an integrated focus on climate change adaptation and biodiversity conservation. There is great potential for complementarity with FAO’s proposed program.	<p>The two projects will complement each other as follows (please see Box 3 of the Project Document):</p> <ul style="list-style-type: none"> <li>- The FISH project is implemented through a non-Governmental consortium of partners under contract to USAID, whereas the LDCF will be directly executed by the Department of Fisheries of GoM (with support from FAO as GEF Implementing Agency); the latter will therefore have a stronger focus on developing institutional capacities within the government to sustain the proposed model of CC resilience.</li> <li>- As it is executed by Government, the LDCF project will have the potential to exercise direct policy influence in a way that FISH will not be able to; it will therefore function as a direct channel into policy of the lessons and messages generated by FISH.</li> <li>- The two projects will work at different levels in geographical terms: FISH will cover four lakes, whereas the LDCF project will focus only on Lake Malombe, allowing more detailed site-specific lessons to be generated that will feed into the FISH project.</li> </ul>

Comment	Response
	<ul style="list-style-type: none"> <li>- The LDCF project will address aquaculture, and its climate-proofing and integration into resilient livelihood support systems, whereas the main focus of FISH will be on capture fisheries.</li> <li>- The LDCF project will have a more specific focus on promoting the status and climate resilience of chambo fisheries in Lake Malombe, given the high value of this species and its corresponding particular potential, if fisheries are restored, to contribute to the livelihoods of vulnerable local communities; FISH will have a broader focus in terms of species.</li> <li>- The FISH project will invest strongly in the generation of technical information to guide fisheries management; while the LDCF project will support a limited number of highly applied studies of direct relevance to CCA, it will principally complement FISH by developing capacities in GoM and others for managing and applying the resulting information in adaptive management. The LDCF project will utilise the Knowledge Management System and digital repository created by FISH to source and disseminate information on CC resilience and other technical messages on fisheries and aquaculture.</li> <li>- The Fisheries Science and Technology Advisory Panel (FSTAP) established by FISH will advise on a wide range of fisheries science issues of interest; the 'think tank' proposed under the LDCF project will be a coordination and advisory platform where all fisheries and aquaculture climate change-related projects within the fisheries sector will share experiences, challenges and lessons.</li> </ul> <p>It is foreseen that FISH will be invited to participate as an <i>ex officio</i> member of the Project Steering Committee, in addition to the regular interchanges that will occur at both central and local levels between the staff of the two projects.</p>

No comments were received from STAP.

**ANNEX C: STATUS OF IMPLEMENTATION OF PROJECT PREPARATION ACTIVITIES AND THE USE OF FUNDS<sup>3</sup>**

A. PROVIDE DETAILED FUNDING AMOUNT OF THE PPG ACTIVITIES FINANCING STATUS IN THE TABLE BELOW:

<b>PPG GRANT APPROVED AT PIF:</b>			
<i>Project Preparation Activities Implemented</i>	<i>GEF/LDCF/SCCF/NPIF Amount (\$)</i>		
	<i>Budgeted Amount</i>	<i>Amount Spent To date</i>	<i>Amount Committed</i>
Activity 1: Stakeholder Consultation	9,703.00	9,467.00	236.00
Activity 2: Elaborate component 1 "Mainstreaming climate change adaptation into fisheries sector policies and capacity building of key fisheries actors"(to underpin all components but mainly components 1 and 2)	27,406.00	48,384.00	-20,978.00
Activity 3: Identification of good practice for strengthening local level adaptive capacity and the early warning systems (to support component 2 and 3)	37,110.00	18,854.17	18,255.83
Activity 4: Elaborate Component 4: Monitoring and Evaluation and dissemination of best practices and lessons learned.	9,703.00	4,084.76	5,618.24
Activity 5: Preparation of full project document	36,078.00	39,153.07	-3,075.07
<b>Total</b>	<b>120,000.00</b>	<b>119,943.00</b>	<b>57.00</b>

<sup>3</sup> If at CEO Endorsement, the PPG activities have not been completed and there is a balance of unspent funds, Agencies can continue undertake the activities up to one year of project start. No later than one year from start of project implementation, Agencies should report this table to the GEF Secretariat on the completion of PPG activities and the amount spent for activities.

**ANNEX D: CALENDAR OF EXPECTED REFLOWS (if non-grant instrument is used)**

NA