GEF-6 PROJECT IDENTIFICATION FORM (PIF)

PROJECT TYPE: Full-sized Project
TYPE OF TRUST FUND:GEF Trust Fund

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PART I: PROJECT INFORMATION

Project Title:	Strengthening transboundary cooperation and integrated natural resources management in the Songwe River Basin		
Country(ies):	Malawi, Tanzania	GEF Project ID:[1]	9420
GEF Agency(ies):	AfDB (select) (select)	GEF Agency Project ID:	
Other Executing Partner(s):	Songwe River Basin Commission (SRBC); Ministry of Agriculture, Irrigation and Water Development of Malawi acting on behalf of Malawi and Tanzania	Submission Date:	07.11.2016
GEF Focal Area(s):	International Waters	Project Duration (Months)	60
Integrated Approach Pilot	IAP-Cities ☐ IAP-Commodities ☐ IAP-Food Security ☐	Corporate Program: SGP ☐	
Name of parent program:	[if applicable]	Agency Fee ($)	607,306

A. INDICATIVE FOCAL AREA STRATEGY FRAMEWORK AND OTHER PROGRAM STRATEGIES[2]

Objectives/Programs (Focal Areas, Integrated Approach Pilot, Corporate Programs)	**Trust Fund**	**(in $)**	
		GEF Project Financing	**Co-financing**
IW-1 Program 1 (select) (select)	GEFTF	7,218,000	11,000,000
Total Project Cost		7,218,000	11,000,000

B. INDICATIVE PROJECT DESCRIPTION SUMMARY

Project Objective: To enhance basin protection, livelihoods and integrated water resources management in the Songwe River Basin (SRB) through improved transboundary cooperation and sustained ecosystem services

Project Components	**Financing Type**[3]	**Project Outcomes**	**Project Outputs**	**Trust Fund**	**(in $)**	
					GEF Project Financing	**Co-financing**
1. Enhancing transboundary management and institutional capacity	TA	1.1 An established and effective Songwe River Basin Commission (SRBC) through strengthened catchment management, planning, and operationalization for the Ten Year SRBDP and its interim phase	1.1.1 TDA and SAP (equivalents, i.e. basin studies, SRBDP/Vision) updated with integration of considerations for climate change and impact on Lake Malawi (flows, flora and fauna, including fisheries) 1.1.2 Institutional and foundational support to the SRBC, with trainings in organizational development (e.g. strategic planning, project management, information management), financial planning/ management, and resource mobilization 1.1.3 SRBC action plan, annual and periodic work plans developed and initiated to guide the Commission and basin districts 1.1.4 SRBC financial sustainability ensured through formalization of the	GEFTF	3,678,630	6,050,000

[1] Project ID number will be assigned by GEFSEC and to be entered by Agency in subsequent document submissions.
[2] When completing Table A, refer to the excerpts on *GEF 6 Results Frameworks for GETF, LDCF and SCCF*.
[3] Financing type can be either investment or technical assistance.

			regulatory framework and agreements overseeing program investments and allocating benefits 1.1.5 Capacity building and Technical Assistance for the SRBC to manage assets and investments under the larger SRBDP (management contracts or concessions)			
		1.2 Enhanced technical capacity, awareness and stakeholder cooperation result in more sustainable management of transboundary resources according to principles of IWRM (better governance and participatory planning produce balanced water use and benefits)	1.2.1 Approval by both countries of a basin-wide water-related agreement (e.g. charter) 1.2.2 Capacity building program formulated and implemented to include training on IWRM and ecosystem-based approaches, with consideration for climate adaptation and gender 1.2.3 Basin and district level knowledge improved for better transboundary catchment management: # of trainings at institutional level/year targeting national authorities 1.2.4 Inter-ministerial committees functioning to improve coordination and decision-making processes 1.2.5 A stakeholder cooperation platform established within the Commission to foster multi-state and partner dialogue, improve coordinated management of shared water system and investments at basin level 1.2.6 Collaboration sought with other partners working in the region, including on Lake Malawi (e.g. IUCN)			
2. Improving early warning, disaster risk management, and monitoring measures	TA	2.1 SRBC and countries cooperatively implement solutions to transboundary issues based on improved knowledge, data, and basin-wide monitoring to address key environmental and climatic challenges impacting livelihoods and ecosystems	2.1.1 A Flood Early Warning and disaster response system established and working, with district disaster response plans developed to ensure the protection of people and the environment 2.1.2 A transboundary basin environmental monitoring system designed and agreed by states, to monitor basin natural resources, habitats, and livelihoods (e.g. impact of flows, downstream reach, sedimentation, lake level, reservoir water quality, riparian habitat change, fisheries, biological imbalances as well as economic benefits from the improved use of water resources)	GEFTF	1,000,000	2,000,000

			2.1.3 Training of professional and technical staff on basin monitoring techniques, and for operation and maintenance of above systems 2.1.4 Information system and data center for environmental monitoring established and housed within the SRBC			
3. Community-based demonstrations in INRM and conservation	Inv	3.1 Demonstration investments enhance practical learning on resource conservation and climate-smart agriculture (for benefit of SRBC, national governments and local communities); improve the water, food, energy, and ecosystem security nexus; and protect basin ecosystems and their services 3.2 Demonstrations/ pilot projects validated and INRM investments catalyzed in the basin, laying the foundation for scaling up good practices during the Ten Year SRBDP and SAP implementation	3.1.1 Integrated soil and water conservation measures applied to # of ha and soil fertility management practices on # of ha of maize cultivation for environmental and livelihood benefits (improve ecosystem and community resilience, efficient water use, and agro-ecosystem productivity) 3.1.2 Improved forestry management to protect the supporting and regulating services of forests, including their role in basin hydrological and soil nutrient cycles (e.g. improved by-laws, management committees formed, guidelines produced) 3.1.3 Awareness raising and capacity building at community level in sustainable land, water, and forest management, including climate change adaptation, linked to pilots 3.2.1 Evaluation of pilots to assess impact, successful techniques and mechanisms for scaling up and out during SRBDP implementation 3.2.2 Capacity building in INRM at district level: gender sensitive trainings of District Council staff, committees and other stakeholders in INRM, participatory land use planning and ecosystem-based management 3.2.3 Funding and investments mobilized for the conservation, NRM and sustainable agriculture components of the SRBDP	GEFTF	1,000,000	1,720,000
4. Knowledge, monitoring and evaluation	TA	4.1 Assessments conducted to supplement TDA and SAP, and better guide decision-making	4.1.1 Detailed updated assessments and maps on: soil, groundwater, basin-wide ecosystems and biodiversity, to guide better decision-making	GEFTF	424,064	630,000

			4.1.2 Best practice guidelines for INRM developed for use during the SRBDP, including guiding principles for environmental flow management, erosion control, pollution reduction, and protection of valuable flora and fauna			
		4.2 Effective M&E, learning and exchange at all levels underpin implementation	4.2.1 Participatory M&E system established providing systematic information on progress in meeting outcome and output targets 4.2.2 Knowledge Management strategy prepared and implemented, including information sharing and contribution to IW experience learning (IWLEARN related activities)			
				Subtotal	6,102,694	10,400,000
				Project Management Cost (PMC)[4]	GEFTF 290,000	600,000
				Total Project Cost	6,392,694	11,000,000

For multi-trust fund projects, provide the total amount of PMC in Table B, and indicate the split of PMC among the different trust funds here: (GEFTF)

C. INDICATIVE SOURCES OF CO-FINANCING FOR THE PROJECT BY NAME AND BY TYPE, IF AVAILABLE

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Amount ($)
GEF Agency	AfDB	Loan	4,855,000
Recipient Government	Malawi	In-kind	1,000,000
Recipient Government	Tanzania	In-kind	1,000,000
GEF Agency	ClimDev Fund (AfDB housed Fund)	Grant	225,000
GEF Agency	IUCN (TBC)	TBD	
Donor Agency	Unknown at this stage	TBD	3,920,000
Recipient organization	River Basin Organization	TBD	
Total Co-financing			11,000,000

D. INDICATIVE TRUST FUND RESOURCES REQUESTED BY AGENCY(IES), COUNTRY(IES) AND THE PROGRAMMING OF FUNDS [a)]

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Programming of Funds	(in $)		
					GEF Project Financing (a)	Agency Fee (b)[b)]	Total (c)=a+b
AfDB	GEFTF	Regional	International Waters	(select as applicable)	6,392,694	607,306	7,000,000
Total GEF Resources					6,392,694	607,306	7,000,000

a) Refer to the Fee Policy for GEF Partner Agencies.

E. PROJECT PREPARATION GRANT (PPG)[5]

Is Project Preparation Grant requested? Yes ☒ No ☐ If no, skip item E.

[4] For GEF Project Financing up to $2 million, PMC could be up to10% of the subtotal; above $2 million, PMC could be up to 5% of the subtotal. PMC should be charged proportionately to focal areas based on focal area project financing amount in Table D below.

[5] PPG requested amount is determined by the size of the GEF Project Financing (PF) as follows: Up to $50k for PF up to$2m (for MSP); up to $100k for PF up to $3m; $150k for PF up to $6m; $200k for PF up to $10m; and $300k for PF above $10m. On an exceptional basis, PPG amount may differ upon detailed discussion and justification with the GEFSEC.

PPG AMOUNT REQUESTED BY AGENCY(IES), TRUST FUND, COUNTRY(IES) AND THE PROGRAMMING OF FUNDS

Project Preparation Grant amount requested: 200,000				PPG Agency Fee: 18,000			
GEF Agency	**Trust Fund**	**Country/ Regional/Global**	**Focal Area**	**Programming of Funds**	**(in $)**		
					PPG (a)	**Agency Fee[6]** (b)	**Total** c = a + b
AfDB	GEF TF	Malawi, Tanzania	International Waters	(select as applicable)	200,000	18,000	218,000
Total PPG Amount					200,000	18,000	218,000

F. PROJECT'S TARGET CONTRIBUTIONS TO GLOBAL ENVIRONMENTAL BENEFITS[7]

Provide the expected project targets as appropriate.

Corporate Results	**Replenishment Targets**	**Project Targets**
1. Maintain globally significant biodiversity and the ecosystem goods and services that it provides to society	Improved management of landscapes and seascapes covering 300 million hectares	*Hectares*
2. Sustainable land management in production systems (agriculture, rangelands, and forest landscapes)	120 million hectares under sustainable land management	*15,000 Hectares*
3. Promotion of collective management of transboundary water systems and implementation of the full range of policy, legal, and institutional reforms and investments contributing to sustainable use and maintenance of ecosystem services	Water-food-ecosystems security and conjunctive management of surface and groundwater in at least 10 freshwater basins;	*1 Number of freshwater basins*
	20% of globally over-exploited fisheries (by volume) moved to more sustainable levels	*Percent of fisheries, by volume*
4. Support to transformational shifts towards a low-emission and resilient development path	750 million tons of CO_{2e} mitigated (include both direct and indirect)	*metric tons*
5. Increase in phase-out, disposal and reduction of releases of POPs, ODS, mercury and other chemicals of global concern	Disposal of 80,000 tons of POPs (PCB, obsolete pesticides)	*metric tons*
	Reduction of 1000 tons of Mercury	*metric tons*
	Phase-out of 303.44 tons of ODP (HCFC)	*ODP tons*
6. Enhance capacity of countries to implement MEAs (multilateral environmental agreements) and mainstream into national and sub-national policy, planning financial and legal frameworks	Development and sectoral planning frameworks integrate measurable targets drawn from the MEAs in at least 10 countries	*Number of Countries:*
	Functional environmental information systems are established to support decision-making in at least 10 countries	*Number of Countries:*

PART II: PROJECT JUSTIFICATION

1. *Project Description.* Briefly describe: 1) the global environmental and/or adaptation problems, root causes and barriers that need to be addressed; 2) the baseline scenario or any associated baseline projects, 3) the proposed alternative scenario, GEF focal area[8] strategies, with a brief description of expected outcomes and components of the project, 4) incremental/additional cost reasoning and expected contributions from the baseline, the GEFTF, LDCF,

[6] PPG fee percentage follows the percentage of the Agency fee over the GEF Project Financing amount requested.

[7] Provide those indicator values in this table to the extent applicable to your proposed project. Progress in programming against these targets for the projects per the *Corporate Results Framework* in the *GEF-6 Programming Directions*, will be aggregated and reported during mid-term and at the conclusion of the replenishment period. There is no need to complete this table for climate adaptation projects financed solely through LDCF and/or SCCF.

[8] For biodiversity projects, in addition to explaining the project's consistency with the biodiversity focal area strategy, objectives and programs, please also describe which Aichi Target(s) the project will directly contribute to achieving.

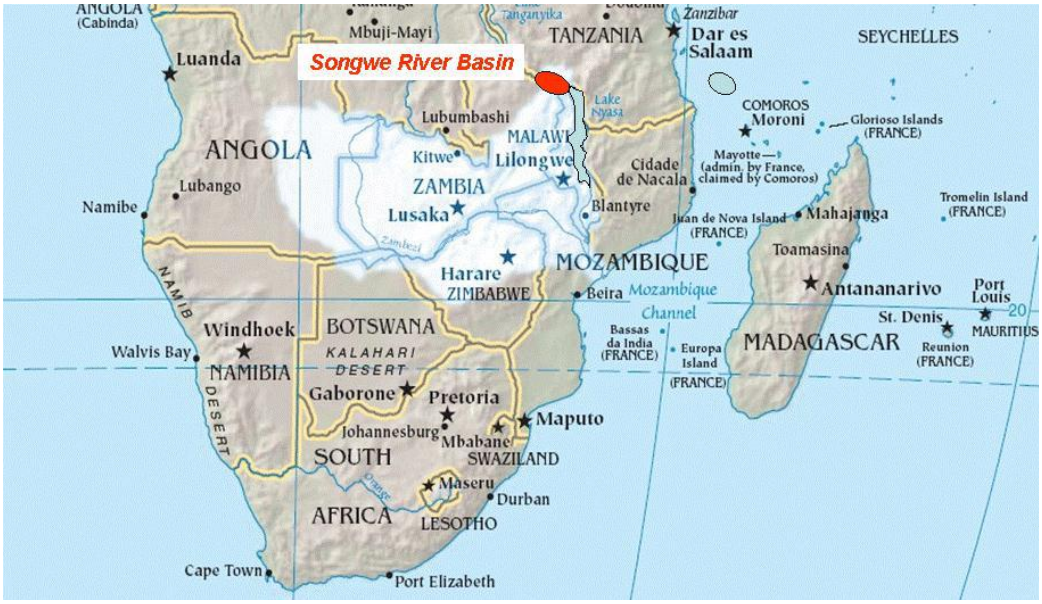
SCCF, and co-financing; 5) global environmental benefits (GEFTF) and/or adaptation benefits (LDCF/SCCF); and 6) innovation, sustainability and potential for scaling up.

1) The global environmental and/or adaptation problems, root causes and barriers that need to be addressed.
The Songwe River forms part of the border between Malawi and Tanzania over a distance of 200 km and lies fully within their territories. The river basin consists of a surface catchment area of approximately 4,200 km2, covering parts of two districts in Malawi (Chitipa and Karonga) and five districts in Tanzania (Kyela, Ileje, Mbozi, Momba and Mbeya). The Songwe runs from an upper Plateau Zone down and to a floodplain and into Lake Malawi/Nyasa. Between the foothills and the lake, the river meanders considerably which renders the river course an unstable boundary between the two countries.

The basin can be divided into three zones: the Plateau Zone, or upper sub-basin, the Escarpment Zone, or middle sub-basin, and the Lower sub-basin. This division is based on variations in physiography, land use and other criteria. The Plateau Zone has a mean elevation ranging from 1,200 to 1,500 meters above sea level (masl), and contains the headwaters and major tributaries. The Escarpment Zone forms the middle basin and is characterized by mountains and numerous tributaries. These tributaries drop from elevations of 2,100-1,800 m down to 700-600 m at the foot of the escarpment. The Lower Basin Zone begins from the foothills and extends to Lake Malawi. In this part, the Kyungu River joins the Songwe. The lower sub-basin is divided into the upper and lower floodplains. This area has the highest rainfall of the basin at more than 3,200 mm annually. The physical environment and rainfall distributions within the catchment are conducive to frequent flooding in the lower basin. It is estimated that floods inundate more than 9,000 hectares of fertile land seasonally. This figure is exceeded when the waters of the adjacent Kyungu and Kiwira rivers and the Songwe merge.

The Songwe River Basin (SRB) is facing growing pressures induced by the basin population and changing climatic patterns. Both natural and anthropogenic stressors, including a fast growing population mixed with climatic variability and unsustainable natural resource practices, are putting ever more strain on water resources, land, and the biodiversity of the catchment. Environmental degradation, habitat destruction and land based sources of pollution are increasing. Safeguarding and enhancing the supply and quality of appropriate water, energy, agro and ecosystem services - while addressing their complex interlinkages within the basin - has become critical for the current and future human and environmental needs of the Basin.

Songwe River Basin Location and Basin Map



The SRB is being adversely affected by unsustainable practices such as deforestation, bush burning and shifting cultivation in the catchment area and on the riverbanks of the upper reaches. The basin population stands currently at about 400,000 with particularly fast growth rates over the past ten years. Up to 80% of the population consists of rural poor that depend on natural assets for their livelihood and household needs. As a result, pressures on land, forests and the river are increasing, forcing cultivation onto steeper, more marginal land and reducing individual land holdings. Growing population and associated socio-economic activities have resulted in changes in land use, water quality, wetlands and fisheries. Along with diminishing water availability, the reliance on unsustainable land practices threatens the overall quality and productivity of soils and the sustainability of rural livelihoods. Coupled with more frequent natural disasters, especially floods, which constitute a structural limitation to the improvement of livelihoods, local communities in the SRB are at increasing risk. The developmental and environmental implications for the SRB are critical.

The SRB is primarily an agricultural area. There is little industry in the basin and few options for alternative income generation. The hilly areas and foot zones are preferred for cultivation, but as settlements expand, the steeper slopes are also taken under intensive cropping. Because of these practices there is high soil erosion and run off which leads to silting of the river and increased flooding. Scarcity of water is part of the daily life for the majority of household farmers. Rough estimates show that there is a significant percentage of the population that lacks access to safe sources (30%, 40%, and 50% in the Lower, Middle and Upper basin, respectively). Soil quality is also heterogeneous in the basin and imposes limits on crop and food production. Fallow periods have shortened, leaving little time for grass, bush and woodland vegetation to re-grow and replenish the soil with organic matter and nutrients. High variability of rainfall and inadequate access to water supplies have been recognized to affect many production and income activities, which in turn affects food security and the health of ecosystems. Loss of vegetation cover, widespread soil erosion, decreased water infiltration capacity, decreased soil fertility and increased sedimentation into the rivers are major problems in the SRB.

The vegetation cover in the middle and upper basins is comparatively better than in the floodplain, given primarily that the latter is mainly cultivated land. However, most of the original primary forest of the upper basin has been replaced by secondary forests or shrub vegetation due to overexploitation. Small areas with remains of high-altitude forests are found. These areas are legally protected as forest reserves but inaccessibility and lower population density may have played the greater role in protection, a situation that will not last much longer given growing population numbers and pressures.

Miombo woodlands cover almost 60% of the basin. Their quality (density and age structure, species richness) however is quite variable. Woodlands are subject to increasing stress from human activities, including extraction of fuelwood for charcoal making, conversion into cropping areas, and forest fires often caused by slash and burn agriculture. Much of the fuelwood is used for brick burning in both urban/semi urban areas and in villages. A significant number of the inhabitants of the SRB (75%) also do not have access to electricity and use forest resources as their main source of energy, demand of which will rise with growing populations and improved living conditions. Unsustainable forest management and deforestation have contributed significantly to the depletion of the natural vegetation cover and to extensive land degradation, which has a significant impact on hydrological and nutrient cycles in the SRB.

Aquatic habitats are also adversely affected by resource overexploitation and the increased sediment load resulting from soil erosion in the catchment area. The general lack of income opportunities leads to both overuse of terrestrial ecosystems and to increasing pressure on fisheries. Over-fishing and unsustainable fishing practices are common and threatening the fish populations of the Songwe River and consequently, Lake Malawi. Additional repercussions are on seasonal and permanent wetlands/swamps and riparian vegetation types found in the lower basin. Swamps have decreased due to the expansion of cultivation while riparian vegetation has been heavily reduced due to encroachment onto river banks. This alslo exposes communities to natural hazards and higher vulnerability to climatic occurrences, given that natural protective barriers are being eroded, reducing their ability to cope with uncertainty and shocks, especially flooding.

Average discharge in rivers has been steadily declining during dry seasons over the years, while flash floods have increased along with high sediment transport during rainy seasons. Surface water sources are being polluted while groundwater is being contaminated by intrusion. Water schemes for the provision of accessible and clean water are limited to urban areas. Unprotected point sources, i.e. boreholes, are easily contaminated and some dry up during the dry season. Treatment systems of sewers and sewage are largely inexistent in the basin area. In areas with higher population densities, lacking sanitation infrastructure causes bacteriological contamination of surface runoff and adversely affects the quality of surface and ground waters. Larger-scale mining of mineral deposits and artisan mining activities in the upper and middle basin are expected to be developed over the years and risk exacerbating water pollution. Agricultural intensification and an increased reliance on agro-chemicals further exacerbate the situation, as chemicals residues are washed off into drainage lines, often ending up in the Songwe and consequently, in Lake Malawi.

Lake Malawi/Nyasa is part of eastern Africa's Rift Valley system and is an ecosystem of global significance with important endemic aquatic fauna diversity. In addition to supporting the livelihoods of more than six million people in its catchment, it provides critical ecosystem services to riparian countries and harbors more freshwater fish species than any other lake in the world. A number of species reside in the Lake as adults and migrate to the Songwe River during the breeding season, which ranges from the onset of rains to July each year. The amount of fish being caught has declined substantially due to overfishing. The productivity of lake fisheries depends on the quality of the ecological, biophysical and biological elements of the river systems that contribute to the overall catchment of the lake. The Songwe River, together with the Ruhuhu River in Tanzania, contributes about 53% of the water going into the greater lake system. The conditions of the Songwe River have thus been identified as of critical importance given the river is found to deposit large amounts of sediment into the lake. Unsustainable land management practices and deforestation in the watershed are key contributors to these sediment inflows.

In the basin, social services, road infrastructure and extension services are also insufficient. Population projections

for the SRB suggest that pressure on natural resources will significantly increase and consequently influence resource scarcity and community conflicts, employment needs and non-agricultural sources of income, availability of basic social services, pressures on forests, and overall food security. Unsustainable practices, poor infrastructure, inadequate markets, and a decline in the use of adequate farm inputs have led to low agricultural productivity across the basin. If current land and water use practices, socio-economic and resource management conditions remain unchanged, further environmental degradation of the catchment will occur.

Some of the main environmental challenges in the Songwe River Basin are:

- Recurrent flooding, especially in the lower basin, which destroys cropped areas, damages infrastructure, and causes loss of life and habitats;
- Increasing drought frequency and water scarcity;
- Growing population pressures due to growing food, water and energy needs, leading to land and forest degradation, declining water levels and quality;
- Deforestation, unsuitable fishing practices, bush burning, and unsustainable cultivation practices causing soil erosion, high sediment loads, and biodiversity loss;
- Deterioration of water quality, health and sanitation facilities plus disposal of waste into rivers and groundwater contaminate and deteriorate the environment and affect public health;
- Climate change and its impact: available data suggests a likelihood of a continuing decline in average rainfall, while extreme rainfall events will tend to increase in magnitude and frequency causing more frequent flooding;
- Frequent shifting of the international border between Tanzania and Malawi in the river delta zone due to the constant and random meandering of the river, making district development planning difficult.

The main barriers are:

- Population pressures leading to growing environmental degradation and loss of ecosystem services, due also to lacking awareness and capacities in integrated water and land conservation techniques;
- Unsuitable agricultural practices and production, considering its vast potential (e.g. the yield of rice remains far below yields obtained under good water management regimes) and untapped regional economic resources;
- Growing interest in basin-wide coordination and planning for regional development, but insufficient capacity for multi-state transboundary catchment management and monitoring;
- Inadequate institutions and financing for basin wide programs with weak regional enforcement and institutional presence for managing increasing and competing demands on water and other natural resources;
- Insufficient knowledge on IWRM, ecosystem-wide approaches, the regional development program's impact on natural habitats, and not enough long-term consideration of climate change risks.

The future of natural resources in the SRB for agro-ecosystems, biodiversity and socio-economic activities, as well as for poverty alleviation, relies on a healthy catchment. Environmental health and ecosystem services are at the center of sustainable development in the region. The local economies are highly dependent on water related sectors and the above barriers need to be addressed through integrated transboundary water resources management, rural development, and associated investments that consider balancing resource use and benefits, for the environment and for livelihoods. In moving towards a sustainable, multi-state management of the SRB, there is growing interest by regional stakeholders in institutional frameworks that bring together fragmented processes into a more integrated planning and management agenda. This has led to the rise of a basin-wide progam for reconciling hydrological and ecosystem complexity, uncoordinated development interventions, and regulatory fragmentation. In the SRB, the drivers of ecological degradation are key challenges that need to be addressed within a coordinated framework and through an ecosystem-based approach to management of the basin by both countries.

2) The baseline scenario or any associated baseline projects

The Governments of Malawi and Tanzania first began discussing a permanent solution to the border problem in 1976, caused by the shifting of the Songwe river course in the lower floodplain, resolving thereafter to formulate a project for its stabilization. In 2002, the two countries engaged in a Preliminary Study, using funding from the Nordic Development Fund (NDF), focused on developing viable options. During the review of the reports, the two

Governments and other partners realized that it was better to consider a much broader basin development perspective in order to tap into the developmental potential of the basin and manage the growing environmental challenges. As such, the initial project idea progressed over the past years into a larger Songwe River Basin Development Program (SRBDP), aimed at supporting sustainable economic growth and poverty alleviation in the entire basin. A Feasibility Study done in 2003, and updated more recently in 2015, defined the context and identified key areas of intervention, among which development of irrigated agriculture, hydropower production, flood control, stabilization of the river course, water supply and sanitation, fisheries development, and the need to create an enabling and sustained institutional framework for joint management of the shared water source. These intervention areas would thereafter become program components of the SRBDP.

The signing of a Memorandum of Understanding (MOU) in 2004 provided the mandate to proceed with a program formulation phase. From 2004 to 2007 the governments of Tanzania and Malawi made significant efforts to mobilize funding for detailed program design and preparations. In December 2008, the African Development Bank (AfDB), as Trustee of the African Water Facility (AWF), provided a grant for financing the design works and investment preparation for the SRBDP by utilizing resources from AWF and the New Partnership for Africa's Development - Infrastructure Project Preparation Facility (NEPAD-IPPF). An AfDB appraisal mission in 2009 concluded that the SRBDP was feasible and economically and socially viable.

The AWF and NEPAD-IPPF financed the appraisal and preparation of the SRBDP from 2012 to 2015 through the Detailed Design and Investment Preparation Project (DDIPP). The SRBDP is growing into a major transboundary river basin initiative envisioning significant multi-purpose water resources and energy infrastructure, the establishment of a permanent joint river authority to manage basin programs, and investments aimed at improving livelihoods and economic growth. The larger program envisages several sub-projects, including the development of a multipurpose dam (for hydropower, irrigation, and flood control) as well as others for enhancing socio-economic and community development, including water supply and rural electrification. Furthermore, it envisions a natural resources and conservation program, meant to enhance catchment protection and minimize or mitigate impact of the SRBDP on basin ecosystems. The SRBDP stated objective is to develop the basin through a comprehensive, integrated, green and inclusive approach. The philosophy is to guarantee that the program benefits will be shared with the basin population.

Following a first phase consisting of the preparation of contextual and feasibility studies, the DDIPP comprised the second phase of the SRBDP from March 2012 to September 2015. The DDIPP paved the way for commencement of the third phase known as the Ten Year Songwe River Basin Development Program (SRBDP) which will be implemented with funding from the two Governments, AfDB, and various other development and financial partners (public and private), still to be fully confirmed. The Ten Year program is meant to finally actuate the planned infrastructure investments and other sub-projects.

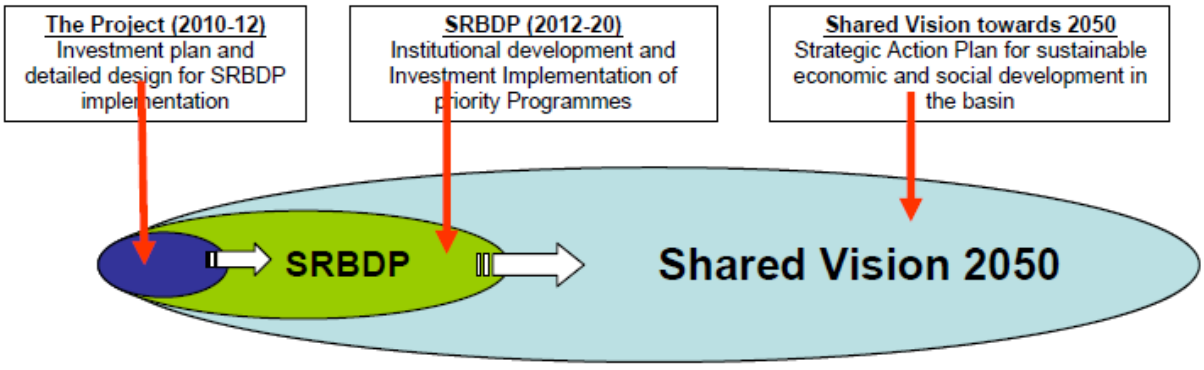
The DDIPP was focused on implementing five main tasks: (i) Preparation of the Shared Vision towards 2050 and the 10 Year SRBDP; (ii) Detailed design and preparation for priority investment projects (with update of the feasibility studies); (iii) Environmental and social safeguarding of the SRBDP by means of a Strategic Environmental & Social Assessment and Environmental & Social Impact Assessment for the full program; (iv) Creation of the Joint Songwe River Basin Commission and initial associated capacity building; and (v) Support to project management and resource mobilisation for the implementation of ten year SRBDP. This, therefore, is the current context from which the GEF IW project takes shapes and will build upon.

The DDIPP had established a Project Management Unit (PMU) to oversee implementation. The PMU was based in Kyela, Tanzania, and coordinated the preparation studies and the consultation process. Reports were reviewed by a Joint Technical Committee (Director level) and approved by a Joint Committee of Officials (PS Level). The higher governance body is the Council of Ministers. As part of the DDIPP, the feasibility studies were updated in March 2015; draft economic, community development and natural resources/environment plans have been made; detailed designs of the dam, hydropower and irrigation schemes finalized; and an environmental and social impact assessment for the SRBDP completed.

One of the objectives of the DDIPP was the preparation of a Shared Vision 2050 and a SRBDP strategy among basin stakeholders to guide the program and the development of the basin over time. The Vision defines the development targets for 2050 and was prepared in a participatory manner, with communities providing input as well. The Vision and strategy can be considered equivalent to a strategic action program (i.e. SAP) for the SRB and include a water resources management plan, a land management plan, and an economic development plan. The Vision acts as a guide for the formulation of the SRBDP while the SRBDP in parallel will serve as the first program for implementing the Vision, meant to maximize the benefits from the larger infrastructure by also improving local living conditions. Both the Vision and strategy were approved by the Joint Committee of Officials in April 2015. The DDIPP additionally included an institutional component that has led to the approval of a Convention creating the Songwe River Basin Commission (SRBC), meant to fully institutionalize a regional and basin dialogue agenda. This convention and its legal mandate have already been approved in Malawi and are now following the approval process in the Tanzanian parliament. This is under ratification and expected in 2016. The SRBC Convention details the roles and responsibilities of the SRBC.

The strategic framework, structure, and implementation modalities of the SRBDP are anchored within the framework of the Shared Vision as illustrated in Figure 1.1 below.[9]

Figure 1.1: Strategic Framework for Long-term Integrated Development of Songwe River Basin



The updated Feasibility study can also be considered similar to a transboundary diagnostic analysis (TDA) for the SRB. The TDA defines the SRB context and identifies a number of viable activities for the SRBDP within that context, including generation of hydropower, irrigation, water supply, and other potential uses of the river and reservoir, such as the promotion of fisheries and tourism. Complete economic and impact analyses have been prepared for the main infrastructure. The result is a proposed number of feasible sub-projects, specifically: Lower Songwe multipurpose dam and hydropower plant (180 MV); two irrigation and drainage schemes covering a total of 6,200 hectares in both countries; flood controls; rural electrification serving as much as 60% of the basin population; and water supply serving much of the population of the SRB (267,000 inhabitants). Furthermore, in order protect and reduce degradation of the catchment and to share the infrastructure benefits with the local populations, the SRBDP is also envisioned to include: a natural resources and land use management sub-program which provides for catchment protection and conservation; a community development sub-program covering education, rural roads, and health centers; and an economic development sub-program to develop viable economic opportunities from local markets and tourism. Overall, the primary outcomes arising from the SRBDP are: increased access to electricity, especially in rural areas; increased access to safe water; reduced frequency of floods; increased irrigated land and therefore farm income and food security; improved efficiency in water resources management, through a formal, cooperative, transboundary framework; improved land and natural resources management; and rural development.

The SRB Commission will have the role of a river basin authority, advising the governments on matters relating to the sustainable management of the basin; identifying areas of cooperation related to transboundary water resources

[9] The "Project" reference in the diagram refers to the DDIPP. The years referenced were revised.

management; coordinating and implementing the ten year SRBDP, including managing associated infrastructure and its benefits. The Commission will eventually assume ownership of the infrastructure developed under the program and be responsible for the management of revenues generated from or by use of the assets, including operation and maintenance. The SRBC is expected to eventually support and finance select sub-programs of the SRBDP, either alone or through PPPs, for example on community development. Other sub-programs are seeking support from financial partners, donors and the private sector, especially in the early years of the SRBDP.

Taking cognizance that it will take some time before the Commission is fully operative and mobilization of all the funds needed to cover the ten year SRBDP, it was decided by the two governments and additional partners that a series of interventions must be undertaken now to maintain momentum, determine donor and financial partners, and lay a stronger basis for improved socio-economic and environmental conditions. The first three years of the SRBDP will thus be covered under an Interim Arrangement phase, planned from 2016/2017. This interim phase will aim at: ensuring the timely and full establishment of the SRBC; mobilize funds; and implement select priority interim pilot projects in order to better preserve the catchment from degradation. Priorities have been established and interim phase interventions are expected to be implemented under the following components: 1. Conservation and Land Management; 2. Social infrastructure; 3. SRBC Capacity building support, including for flood risk management; 4. Interim program management.

3) The proposed alternative scenario, with a brief description of outcomes and components of the project
The Songwe River is a valuable local and regional water course that is facing growing pressures by human and climatic stressors, placing communities and both aquatic and terrestrial habitats within the catchment at risk. The SRBDP formulation process and studies confirmed that considerable socio-economic and ecological benefits can be derived from cooperative basin-wide sustainable development. Yet, the current cumulative effects of multiple stressors is leading to serious degradation of the basin ecosystems and their services, which will increasingly threaten livelihoods and undermine the local, national and regional socio-economic potential of the basin. The proposed GEF IW project aims to improve transboundary management of the basin and reduce degradation of the catchment arising from unsustainable natural resource activities. The IW project will build upon the existing baseline scenario and interventions over the past few years, and will make a strong contribution to the interim phase of the SRBDP and initial implementation of the Vision/SRBDP strategy (i.e. the basin action plan). It will focus on institutional capacity development, demonstrative improvements in water and land conservation practices, and enhanced cooperation and dialogue between Tanzania, Malawi and other stakeholders.

GEF IW funding is sought to support the initial priorities of the SRBDP, in particular to enhance governance, capacity and monitoring aspects, and improvements in integrated water and natural resources management through small land-based investments, which will serve as a basis for learning and subsequent scale up. The countries need underlying support to actuate the SRBDP interim phase, which will be key support to the river basin authority, and will lay the basis for the full realization and sustainability of the basin development program. As described in the SRBDP strategy, the objectives of the interim phase are: ensure the full establishment of the Joint SRBC, hence commencement of the SRBDP; mobilize funds for the Ten Year SRBDP; and implementation of select early pilot projects, arising from the outcomes of the DDIPP.

The GEF IW funding comes at a very timely moment to assist in actuating select interim phase objectives and initiating implementation of the basin strategy. It will ensure the full establishment and institutionalization of the basin commission, enhance monitoring and risk response within the basin, and help mobilize funds for the regional program, particularly for conservation and INRM activities. GEF will be critical to guaranteeing core support to and operationalization of the basin authority, and will be strategic in shaping how future basin planning and management are pursued. Moreover, early investment projects will be implemented as part of the preparation and learning process by the SRBC, the two Governments, and the beneficiary communities for effective implementation of community-based field level activities on water and land conservation. They will serve as demonstrations and experience learning, upon which forthcoming activities of the SRBDP can build effectively.

IW funds will support institutionalization and capacity building for the SRBC, including in environmental and climatic monitoring, transboundary governance based on IWRM principles, community based activities in resource

conservation, and learning/exchange. An ecosystem-based approach will be pursued to address the multi-faceted challenges faced in the basin and underlies the GEF intervention. IWRM/INRM based on a holistic landscape perspective of basin development will enable greater and balanced benefits for the population and the local, regional and global environment. The project will also contribute to increased resilience of basin communities to changing socio-economic and natural conditions, including climate change and variability. Integrated and transboundary NRM will address the links between development, conservation, resilience and disaster risk reduction.

The IW project falls within the needs of the SRB strategy to initiate its realization. Given that SAP and TDA-equivalents already exist, the GEF project will focus on updating them as necessary, on implementation of initial priority activities, needs and gaps as suggested in the TDA and described in the SAP. Project design takes full account of the Shared Vision 2050 and conclusions of feasibility studies, and ultimately contributes to the Vision mission. The IW project will implement select on-the-ground pilots to strengthen bi-country collaboration and address key drivers of catchment degradation. It will prioritize and ensure not only multiple partnerships but also a landscape-based approach to SRBDP implementation. The IW project will thus be critical to laying the foundations that will ensure that the SRBDP indeed develops the basin through a comprehensive, integrated, green and inclusive approach. It will facilitate the sharing of benefits between the two countries and joint responsibility for basin protection, creating an enabling environment for action and lasting commitment.

Components and outcomes

GEF will support the process for transboundary dialogue, building trust and enhancing capacity to manage the shared basin. IW funds will allow a continuation of the momentum gained through the DDIPP and support interim interventions leading to commencement of SRBDP implementation. Components comprise viable national and transboundary activities addressing issues of watershed management, conservation, resilience, knowledge and capacity, concurrently addressing technical, institutional, socio-economic, and environmental elements. Specifically, the IW project will: (i) strengthen institutional capacities and mechanisms for basin planning, monitoring, collective management and transboundary governance; (ii) foster water and land conservation to safeguard water and soil quality while enhancing agricultural productivity, improving livelihoods, and reducing habitat loss (including for forests and fisheries); (iii) develop flood management/risk attenuation and monitoring in the basin and provide community level adaptive support; (iv) promote institutional development, support and associated capacity building to the SRBC and at district level; and (v) enhanve knowledge and learning at all levels. The project will be implemented through four inter-linked components that will deliver objectives consistent with the Vision strategy and IW program expectations. These are:

Component 1: Enhancing transboundary management and institutional capacity

The SRBC will be the river basin authority and primary managing body for transboundary cooperation, basin development and conservation. A permanent Commission is wanted by both the Malawi and Tanzania governments. Once fully operational, it will collaborate with them and Regional and District administrations to implement the SRBDP and eventually take on roles for economic promotion and environmental stewardship. There is consequently the need to ensure full institutionalization of the SRBC and sustained capacity in terms of knowledge, planning, finance, and other. Component 1 will focus on helping to establish a working and effective bi-country Commission by strengthening catchment planning, management, and operationalization for the SRBDP, its interim phase and the basin vision. There is currently an existing structure acting as an interim SRBC and component 1 activities will help ensure the smooth transition from the interim to a full-on effective Commission, and will be critical to its formalization process and commencement of basin strategy implementation.

Component 1 will enhance dialogue and institutional frameworks needed for effecting the SAP, and will help lay stronger foundations for sustained cooperation between the two countries, based on IWRM and balanced benefits principles. Activities will also seek to enhance technical skills, awareness at different levels and stakeholder collaboration so that a more sustainable management of transboundary resources according to principles of IWRM can be pursued. Activities thus relate to: improving knowledge on the basin and impacts of the SRBDP; institutional support and capacity building for the Secretariat and larger Commission itself (including for owning and managing the SRBDP and its main investments); governance frameworks; and stakeholder dialogue.

In its quest to improve knowledge of the basin and full impact of the SRBDP, TDA and SAP (-equivalents, i.e. the basin studies, SRBDP strategy) will be updated with integration of considerations for climate change and impact of the SRBDP investments. Given the little or no mention of climate change and variability in the Shared Vision and TDA, these will be updated with integration of climatic considerations and risks, with an emphasis on the potential environmental, ecological and socio-economic disruptions owing to future climate patterns. The idea is so that adaptive management can be better applied and the SRBDP better account for risks. An updated TDA will better complete the existing environmental impact assessments with stronger consideration for impact of the program, especially on Lake Malawi (such as on flows, flora and fauna, including fisheries). This way more effective mitigation planning and actions can be taken as part of program implementation, and better partnerships sought.

Institutional support to the SRBC will focus on organizational development, financial planning/management, and resource mobilization, so that longer term sustainability (operational, administrative, fiscal, etc.) can be assured. Institutional development and capacity building will comprise: the preparation of SRBC action plan, annual and periodic work plans to guide the Commission and basin districts; trainings and technical assistance in strategic planning, project management, information management, and financial management (e.g. for the SRBC to manage assets and investments, incuding management contracts or concessions); formalization of the regulatory framework and agreements overseeing program investments and allocating balanced benefits; trainings on IWRM and ecosystem-based approaches, with consideration for climate adaptation and gender, both at the level of the SRBC and targeting national authorities (e.g. District offices). The SRBC will eventually take on the role of owner and operator of the main infrastructure developed under the SRBDP and, as such, must have the skills to manage assets, secure returns, and ensure that benefits (e.g. revenue from the HPP) are distributed equally, including to basin populations, through the financing of community and socio-economic development activities.

Capacity building will be complemented by support to governance and cooperation frameworks. These will include the preparation and approval by both countries of a basin-wide water-related agreement (e.g. a charter); working inter-ministerial committees for better coordination and decision-making processes; and the establishment of a stakeholder coordination platform within the Commission to foster multi-state dialogue and even donor collaboration. The objective is for stronger participatory planning to produce balanced water/resource use and benefits.

Component 2: Improving early warning, disaster risk management and monitoring measures
The project will additionally improve monitoring and response systems, with enhanced knowledge and basin-wide monitoring so that the SRBC and countries can better and cooperatively implement solutions to transboundary issues, and address key environmental and climatic challenges impacting livelihoods and ecosystems. Component 2 is dedicated to establishing early warning, especially for floods, and disaster risk management and response mechanisms, with needed complementary skills building.

Monitoring and information management will be strong sub-elements of the project, which will strongly improve decision support and response systems. Flooding is frequent in the Lower Songwe floodplain. Community and structural adaptive capacity can be enhanced through better monitoring and early warning, allowing sufficient time for communities and operators to respond. A Flood Early Warning and Response System will be established to reduce risks from floods to communities, agro-ecosystems and infrastructure. This will include district disaster response plans to ensure the protection of people and the environment locally, allowing people especially in the lower floodplain to evacuate themselves and belongings if needed.

Moreover, the availability of hydro-meteorological data in the SRB, especially on rainfall and river flow, is very limited. This compromises climatic and agro-productivity surveillance, and is also insufficient for the effective planning of investments and activities envisioned under the SRBDP, which need to rely on high quality, real time meteorological and river flow data.. As such, to further enhance monitoring and response capacities, a transboundary basin environmental monitoring and research system will be designed and agreed by states, to observe natural resources, habitats, and livelihoods (e.g. impact of flows, downstream reach, sedimentation, lake level, reservoir water quality, riparian habitat change, fisheries, biological imbalances as well as economic benefits from the improved use of water resources). Co-financing will fund the actual hydromet stations under the SRBDP, but GEF

IW funding will include hydrological and environmental research, and make sure monitoring is done effectively and consistently, that professional and technical staff are trained on effective techniques, and that an information system and data center will be established within the SRBC to gather and store data. The monitoring system will improve data availability all-around for informed decision-making and for sharing with stakeholders, and will also provide the Commission with quality data for investments and operations.

Component 3: Community-based demonstrations in INRM and conservation
Agriculture is the most important economic activity for communities in the SRB. Rain-fed agriculture accounts for 66% of regional GDP, of which 40% is maize cultivation. Much cultivation is done on riverbanks due to their natural fertility and access to water. However, agricultural activities are increasingly expanding onto marginal areas and areas important for natural vegetation cover. This, coupled with unsustainable practices and inefficient water use, are causing terrestrial habitat loss, degrading acquatic habitats, and overexploitation of natural resources, resulting in depleted soils and water loss. Furthermore, agriculture in the region is highly vulnerable to erratic rainfall and floods. Most rivers and streams in the basin dry up or shrink during the dry season, while flooding is common during the rainy season, especially in the lower floodplain. Most floods occur as flash floods which rapidly destroy crops and structures, and result in loss of yields. It is becoming increasingly important in the SRB to improve both water and land conservation by optimizing existing resources, and to promote sustainable, climate smart agriculture. Farmers lack appropriate technologies and knowledge of sustainable, adaptive practices, and as a result, soil exhaustion and land degradation are growing problems, affecting the quality of the catchment system and the delivery of ecosystem services.

The biggest source of water for all the seven SRB districts is from streams, rivers and groundwater, which is fed from rainfall. The wetlands within the Basin - mainly the Songwe, Kiwira and Kyungu rivers - provide great potential for sustainable agricultural activities. However, lowering water levels are becoming an increasing problem, attributable to unreliable rains and human activities, such as deforestation and steep-slope or river-bank cultivation which result in erosion and sedimentation. Unsustainable cultivation together with excessive deforestation in the SRB are resulting in a loss of natural protective barriers and of the resource base critical to local livelihood. Forests and trees play an important role in securing water quality and catchment protection. Safeguarding natural resources, including trees, is understood as critical to the future of the basin and is at the center of the Basin Vision. As such, component 3 aims at initiating catchment protection measures in order to maintain vital ecosystem services and enhance water, food, and ecosystem security.

Earlier interventions in the SRB for soil and water conservation have been insufficient in scale to truly tackle the growing problem. A more focused, larger, and integrated program covering the Basin area is required. Sustainable productivity increases on existing cultivated land can be achieved through land rehabilitation measures and water use efficiency which can both enhance production and prevent loss of natural resources/habitats. In fact, the SRBDP recognizes this and includes important sub-components on natural resources management, based on sustainable agriculture, forestry and water management. The SRBDP has deemed participative planning for conservation and multi-land use activities at community level a good approach. A select number of these SRBDP sub-projects have been identified as important early investment projects for the interim SRBC. Component 3 of the GEF IW project thus centers on the implementation of select community based demonstration investments in land and water conservation and INRM, inspired from two priority interim SRBDP sub-projects. These IW funded demonstrations will represent a start on SRBDP implementation at ground level.

The intention and objective is for the demonstrations to enhance practical learning on conservation techniques and climate-smart agriculture (for the benefit of SRBC, national governments and local communities, thus enhancing capacity building aspects); improve water, food, and ecosystem security; and maintain basin ecosystem services. The pilots will represent the avenue for experience and lesson learning, which will be applied and upscaled later through co-financing of the SRBDP. They thus lay the basis for extending impact beyond target sites. The pilots will also provide a platform for SRBC work plan development and will prove beneficial as on the job training.

Component 3 will involve the application of integrated soil and water conservation measures and soil fertility management practices in areas on both sides of the river. The aim of the pilots is to demonstrate the efficacy and

benefits derived from INRM in terms of sustainably increasing cropping, enhancing soil health, and improving ecological conditions in the catchment, with concrete benefits to livelihoods and the environment. The soil and water conservation pilots will improve agro-ecosystem productivity, efficient water use, and ecosystem and community resilience. Additionally, select activities at district level will seek to enhance capacity for the improved management of forests, in order to protect their critical supporting and regulating services, including their role in basin hydrological and soil nutrient cycles. Activities may include the review or formulation of forestry by-laws, guidelines, and the formation or strengthening of forestry management committees. These will prove critical to district level capacity building aspects as well.

Awareness raising and capacity building at community level in sustainable land, water, and forest management, including climate change adaptation, will be linked to the pilots, always necessary for sustainability and scaling up objectives. Communities will be trained in SLWM and farmers to rationalize input use, adopt conservation agriculture, and enhance cropping to sustainably increase food production without harming the environment. As NGOs are often experts in such community projects, they may be recruited to assist in sensitization activities. Concurrent to community level capacity building, this will also be pursued at district level with training of District Council staff, committees and other stakeholders in INRM, participatory land-use planning and ecosystem-based management. Targeted regional forestry offices will later – under the SRBDP – better be able to enhance buffer zone regulations as well as contribute their own expertise and resources in community forestry projects and forestry patrols. By building capacity for forest management at this early stage it is intended that the program be expanded across the SRB through co-financing. The component will translate into actionable interventions that tackle the pressures and key drivers of environmental degradation.

The demonstration pilots will subsequently be validated in order to catalyze much larger INRM investments in the basin and expand good practices during the Ten Year SRBDP and SAP implementation. An evaluation of the pilots will seek to assess impact, successful techniques and mechanisms for the aim of eventually scaling up and out during SRBDP implementation. It will also prove valuable to the mobilization of additional funding and investments for the conservation, NRM and sustainable agriculture components of the SRBDP, representing a proof of concept approach. The pilots will lay a foundation for catchment conservation during SRBDP implementation and beyond.

Implementation of Component 3 activities, coupled with their eventual scale up, will improve SLWM, especially in areas characterized by land degradation and deforestation, and concurrently support the maintenance of ecosystem services critical to people and nature. Diverse and sustained agro-sources will work to reduce pressure on ecosystems while applying climate-smart techniques will increase community resilience. The component will address competing needs for water, land, and energy (forests), and help safeguard resource availability and quality. Activities will help enhance productivity of lands and will reduce deforestation, habitat loss and minimize erosion, sedimentation and flooding in the catchment.

Component 4: Knowledge, monitoring and evaluation

Knowledge, monitoring and evaluation, of both the IW project and the SRBDP, are significant aspects and comprise the last component. Component 4 will include assessments, conducted to supplement the TDA and SAP, and better guide decision-making; and effective M&E, learning and exchange to underpin all levels of implementation. Given the existence of numerous knowledge gaps in hydro-meteorological and environmental aspects of the basin, the TDA-equivalent will be updated by studies deemed crucial for more effective program implementation, monitoring, and basin conservation, improving knowledge about pressures and drivers of catchment degradation. These will include: detailed updated assessments and maps on soil, groundwater, basin-wide ecosystems and biodiversity; and best practice guidelines for INRM, developed for use during the SRBDP (including guiding principles for environmental flow management, erosion control, pollution reduction, and protection of valuable flora and fauna). The good practice guidelines will be critical to also regulating the construction, operation and post operation phases of the SRBDP.

Furthermore, a basin-level participatory M&E system will be designed under the project and managed by the Commission. The M&E system, which will include environmental and hydro-meterological monitoring linked to the SADC-HYCOS M&E system as well as to national M&E systems, will be based on a logical framework approach,

and will be supported by an Information Management System. This will provide systematic information on progress in meeting outcome and output targets, and monitor basin strategy implementation objectives. Finally, a Knowledge Management strategy will be prepared and implemented as part of project management activities, including information sharing and contribution to IW experience learning (IWLEARN related activities).

From implementation of the IW activities, the expected project outcomes are:

1. Enhanced IWRM and cooperation over a transboundary water system between Malawi and Tanzania;
2. A working and sustained River Basin Authority, with secured finances, established procedures and skilled staff;
3. Increase in agro-ecosystem productivity, food security and ecosystem health through soil and water conservation and enhanced resource management (contributing also to improved water availability and quality);
4. Sustainable land, water and forest management in target areas leading to reduced catchment degradation trends;
5. Overall livelihood improvements of basin inhabitants through enhanced food, water, and ecosystem security;
6. Reduced frequency of floods, soil erosion, and sedimentation in water bodies;
7. Enhanced resilience to climate and other shocks;
8. Improved knowledge, data and monitoring capacities on the SRB, both socio-economic and environmental;
9. Enhanced conservation and sustainable management of the SRB ecosystems, with secured services, including better protection of river systems and Lake Malawi.

The outcomes expected from the larger SRBDP are (as defined in the SRBDP guidelines):
Strengthened cooperation governed by a joint River Basin Commission and instruments for investment mobilisation for river basin development implementation. Songwe River basin development will lead to:

- Increased access to electricity for the populations in the basin and the entire two countries;
- Increased access to water supply;
- Reduced frequency of floods;
- Increased irrigated land and crop yield;
- Improved cooperation in transboundary water resources management.

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

Environmental degradation resulting from multiple stressors are causing habitat destruction and loss of ecosystem services in the Songwe River Basin. Healthy ecosystems are critical to the overall functioning of the basin and to the livelihoods of communities. There is thus an acute need for balancing competing demands for water, land, energy, etc. and address associated trade-offs. GEF IW financing will support incremental support to transboundary cooperation, sustainability and ecosystem-based management, knowledge on local habitats, and local pilot conservation activities that will leverage baseline investments, particularly in integrated natural resources management. The GEF and baseline program will together foster a transition within the basin that will promote rural development; improve livelihoods; support water, energy and food security; and promote the sustainable use and management of natural resources in a transboundary context. As the baseline will be inclusive, support economic integration as well as private sector development, the GEF will enhance all aspects related to governance and ecosystem protection, with benefits spilling over to the national and regional level.

The larger SRBDP covers various integrated sub-projects meant to tap the vast socio-economic development potential of the basin resources, vis a vis water, energy, and agriculture, with added considerations for community development and basin protection. IW funding will assist Tanzania and Malawi to advance and initiate implementation of the SRBDP strategy (SAP equivalent) and to move into concrete actions in terms of cooperative planning and institutional set up, initial implementation of IWRM priorities, and adoption of common environmental monitoring procedures. GEF resources will also enable implementation of on-the-ground pilot interventions demonstrating the benefits of sustainable agriculture, water and land conservation. It will be pivotal in making the SRBC a functional, effective and operational river basin authority, with a working Secretariat, technical skills and

sustainable financing. In the framework of fully establishing a permanent Commission and implementing the SAP, IW funding will enable the consolidation of bi-country efforts to reverse trends in catchment degradation and embrace a more adaptive ecosystem-based management approach from the start. This way, the countries will be better able to work cooperatively to meet higher demands on water and other natural resources for production and energy by the growing population, thus enhancing water, food, energy, and ecosystem security.

The table below presents the estimated costing needs of the ten year SRBDP based on the Basin Development Plan and the detailed design plans. Financing is expected from the AfDB, Governments of Tanzania and Malawi, NEPAD, other donors, and private sector actors. A PPP feasibility study and a financing strategy were carried out and the financing of the program will be structured in stages. Program financing will be a mix of Public-Private-Partnership schemes, concessional loans, grants, governments funding, in-kind, etc. depending on the type of component activity and investment. The Commission is epected to thereafter benefit from part of the revenue of the hydropwer, and be capable of financing future measures and needs, for example, additional community infrastructure, rural electrification and economic development activities.

Both Governments have engaged with donors starting in 2014 based on the feasibility studies, and a new round of consultations during 2016 will help prepare for a Donors conference likely to take place in late 2016. DBSA and the EU have shown a particular interest in the program, as well as a number of private companies for the PPP. Moreover, the two countries are currently preparing a proposal to the Green Climate Fund (GCF), with assistance from AfDB, given the strong climate change mitigation and adaptation potential of the program. The larger Program/Vision is ideal for facilitating private sector participation in development through investments in energy, agriculture, tourism, trade, and fisheries.

The following cost breakdown is by envisioned SRBDP sub-components (indicative):

Component	**USD**
Dam and HPP	514,000,000
Rural electrification	39,000,000
Agriculture and irrigation	92,000,000
Water supply	20,500,000
Conservation and natural resources management	3,650,000
Community development (schools, health centers, roads)	87,000,000
Institutional capacity building	8,200,000
Economic development	7,050,000
Total	**771,400,000**

The GEF project will overlap the SRBDP for a period of five years, following appraisal of the AfDB project expected in early 2017. Although program financing needs to be confirmed and finalized, co-financing for the IW project will come from diverse sources and will include in-kind co-financing by the two governments to support the interim phase of the SRBDP and interim SRBC institutional support; co-financing to establish hydromet stations (from the ClimDev fund, AfDB and government) to support early warning, basin-wide monitoring and learning; and additional funding from other donor agencies mobilized for activities in conservation and natural resources management (serving as co-financing to the demonstration investments), linked to sustainable agriculture, fisheries, and forestry, and water conservation (smale scale irrigation, water harvesting, reduced contamination and pollution), etc. Co-financing will amount to approximately USD 11 million, possibly more. Table C displays an indicative breakdown of funds, and these will be confirmed at CEO endorsement. GEF IW funds will fund in part institutional capacity building, conservation and natural resources management components, in addition to M&E and learning aspects (with 1% of project grant allocated to IWLEARN activities).

Knowing that it will take some time before full mobilization of funds for the Ten Year SRBDP, the two Governments and other partners are planning for the interim period, which comprises the phase between the end of the DDIPP and full commencement of the SRBDP, when the planned investments and program components will

begin implementation. This interim phase is critical: it represents a foundational period under which institutionalization will be sought and capacity building and select early pilots will be pursued, which will lay the basis upon which the larger program will build and represents an experience learning, institutional strengthening and demonstration period. GEF IW funds are requested to partly support and co-finance this phase. They will be vital to its realization and to influencing the perspective and approach of the full program. It is the right timing to incorporate stronger considerations for sustainability, conservation, balanced benefits, governance, and climate change, and IW funding will help secure this. Without IW funds, it is likely that full consideration for transboundary IWRM and an ecosystem-based approach to basin management will not be pursued, and that economic interests will take greater precedence over basin conservation and pursual of the Songe Vision in all its socio-economic and environmental objectives.

Given the current environmental degradation trends in the SRB, the updated feasibility study concluded that the present situation in the basin without any SRBDP would constitute the "worst case" scenario for the basin and the environment, if continued pressures on catchment resources remain unabated. With GEF, not only will there be supplementary considerations for GEBs and sustainability, but also minimizing of potential adverse impacts of the larger program. Without GEF, and its mitigatory, foundational institutional strengthening and conservation measures, expected adverse impacts will more likely occur. GEF activities for reducing water and soil fertility loss and compensatory SLWM activities, for example, will offset impacts of land degradation, erosion, and overexploitation of resources, including forests. Without the IW activities, transboundary issues on the health of an important water system will not be systematically and comprehensively addressed and the momentum of a sustainable and green SRBDP may be lost.

Incremental to other components of the program, the GEF project will assure that sustainability, multi-state cooperation and catchment conservation are an integral part of strategic planning and objectives from program start, with an added, stronger consideration for climate resilience, gender and securing balanced benefits. The proposed project is fully consistent with the long term goal of the IW focal area, enhancing and maintaining cooperative momentum, and the focus on basin wide IWRM. The project will strengthen the basis for multi-stakholder cooperation, monitoring, knowledge, capacity building, and enabling frameworks - for the lasting programming of sustainability interventions in the basin. Such interventions will rehabilitate and stabilize the larger catchment and its ecosystems. The GEF IW focal area objectives and programs targeted are: IW1, Program 1; and IW2 Programs 3 and 4. The water/food/energy/ecosystem security nexus is fully represented by the baseline and GEF project. While the program envisions large interventions with the dam, hydropower, and water supply, the GEF activities will better ensure integration of an ecosystem approach to catchment management and preservation, thus representing synergy with land degradation, sustainable forestry, biodiversity conservation and climate change adaptation strategies. With its additional consideration for climate variability and change, gender mainstreaming, and synergy, the project responds to specific requirements and aspirations of the IW Strategy.

GEF activities will help target the underlying barriers to basin protection, help guide and green the SRBDP investments, and will be steered by the findings of an updated TDA and SAP, for informed decision-making and greater consideration of the full landscape. Given its timing, the GEF IW project will be a foundational investment pursuing the Songwe Vision. Success in the project will lay the basis for longer term local and national socio-economic benefits for the two countries, but also ensure that local, regional and global environmental benefits are attained. The incremental benefits of this project will accrue to the shared water course between Tanzania and Malawi, while lessons learned on transboundary issues will be relevant to other African basins.

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

The project aims to contribute to halting the deterioration of natural resources, habitats and ecosystem services in the SRB. The aim is to enhance a process that will support a trend towards cooperative sustainability in the catchment. With SRB livelihoods dependent primarily on agriculture, local development must concern the health of agro-ecosystems in the short and long term. Global benefits, as by the IW Focal Area Strategy, will accrue by facilitating a broader and more effective bi-country management that will embrace the Basin in its entirety and foster the integrity of basin ecosystems and of the services they provide locally, nationally and regionally.

Sustainable development of the SRB implies meeting the basic needs of both current and future generations without harming the environment or depleting the natural resources upon which they rely. Given the very close links between production, income generating activities, population growth, and ecosystem health, the living conditions of communities will be determined by the overall health of the basin. For this very reason, GEF activities coupled with the SRBDP will contribute to the overall socio-economic development and environmental health of the catchment area and sub-region. Through the project, it is anticipated that improvements in transboundary water management will be realized while in the longer term, as the Vision strategy continues to be implemented, stress on the basin ecosystem will be reduced and services rehabilitated. Improvements in the environmental status of the river, lake and the larger catchment will be become discernible. Supporting institutional grounding, field level interventions, and providing countries with better knowledge, capacity and planning tools will help reduce long term stressors.

Socio-economic benefits for the target communities in the riparian countries will be realized through pilot investments in INRM, capacity development, knowledge and support to governance processes. The risks of variability in water resulting from extreme climate events (floods, drought) or long-term climate changes (reduced rainfall) will be reduced. The overall development impacts of the project will be its contribution to reduced poverty, improved productivity and livelihoods, better living conditions, increased resilience to changing natural and socio-economic conditions, enhanced food and energy security, minimized impacts of floods and droughts, reduced land degradation, and reduced water conflicts as well as socio-economic benefits for the two countries. By promoting adaptive management and enhancing SLWM, local communities will benefit from the effects of a restored productive resource base and reduced vulnerability.

In addition to helping rehabilitate the landscape and restore ecosystem functions, the project and program also increase water, food, energy, and ecosystem security through a more sustainable management of natural resources that delivers balanced environmental and socio-economic benefits. IWRM investments will help maintain critical services provided by the SRB's natural assets, balancing competing resource uses across needs, communities, and national borders. Targeted activities in SLWM plus associated capacity building will restore agro-ecosystem and natural habitat functions, creating important linkages with land degradation, biodiversity and climate change objectives. More sustainable and productive agricultural lands will work to lessen pressure on exhausted soils and reduce expansion of cropping into natural forested areas.

Conservation and rehabilitation of the catchment, as promoted by the IW project, will result in habitat preservation, improved livelihoods, and protective buffer zones. Together, these will enhance ecosystem and community resilience and the sustained provision of ecosystem services, and create a context in which there is a continuous and balanced increase of benefits arising from a healthier Songwe basin to both countries. Considerations for sustainable land, water and forestry will reduce sedimentary load in the river, provide natural defense, and reduce the current high rates of deforestation, bushfires and encroachment in areas of high biodiversity value (incuding protected areas).

The GEF IW project first and foremost will result in strengthened cooperation between the two governments on the joint development of the SRB governed by a working joint Songwe River Basin Commission, and contribution to the SAP/Vision priority implementation. Specifically, the IW GEBs expected by the project will relate to: cross-country cooperation to reduce threats to an international water body; reduced degradation and pollution in the water course and basin from land-based activities; restored and sustained ecosystems goods and services, reduced vulnerability to climate variability, especially floods; and increased ecosystem and community resilience. Furthermore, successful implementation of the full program will assure that pollution and sedimentation of the river bed and of Lake Malawi, a biodiversity hotspot of global concern, are reduced and its ecosystems better preserved.

6) Innovativeness, sustainability, and potential for scaling up

The water within the SRB serves human needs (drinking, cooking, sanitation, etc.) as well as needs for agriculture, livestock, industry and fisheries. If properly harnessed and managed in a way that balances different needs efficiently, water resources in the basin will allow degraded land to become more productive and will provide healthy habitats for flora, fauna and people. Transboundary water management necessitates a fully multi-sectoral and basin wide approach.

Project innovativeness relates to its truly integrated, cross-sectoral, inclusive and participatory nature. The approach to the development of the Shared Vision 2050 followed the idea that planning in the water sector is more equitable and effective if carried out at the basin level rather than at sectoral or administrative levels which do not fully recognize the linkages in planning the balanced use of all resources. Given its integrated and multi-sectoral nature, even within the AfDB the program is seen as a flagship example of a "One Bank" approach. It meets four of the five new priorities of the Bank: feed Africa, power Africa, foster regional integration and improve quality of life. The financial mechanism which forms part of the HPP revenue to finance the SRBDP through the Commission is quite innovative and will guarantee inclusiveness and financial sustainability of the program.

As regards sustainability, the Project design places specific emphasis on environmental and social mitigation and safeguarding, and strong consideration for establishing and sustaining a working Commission over time. The interim structure already in place replaces the PMU and continues to manage the planned investments, thus creating continuity over time. Imbedding the project management in the local government institutional framework facilitates effective implementation, mainstreaming of the project into relevant government institutions, and better dispersal of lessons learned. This also facilitates and enhances scale up and replication of good practices nationally and regionally. Imbedding project activities within District institutions builds sustainability of key activities and significant capacity of stakeholders that are driving development strategies in the target sites. The design principles of the project can foster replicability across scales through up-scaled learning and mainstreaming into development processes. In particular, it will provide best practices for application nationally and in other river basins and catchments across Africa (for e.g. Lake Malawi, Shire river basin).

Sustainability of the strategies for management and development of the SRB is also heavily reliant on the formulation of practical basin level enabling frameworks that support good governance and that encourage effective participation of all stakeholders. The Vision supports and articulates these priorities and a common framework that coherently links social policies, resource management systems and governance. This process has already begun and will be strengthened under the GEF IW project. The focus on capacity building at both institutional and community level will generate lasting knowledge that can be utilized for future replication in other parts of the two countries. The training and participation of local stakeholders in project activities contributes to sustainability.

The economic viability of the SRBDP and its contribution to economic development (e.g. revenue generation, local employment) have received special attention by other donors. The planned infrstructure will generate several multipurpose benefits connected to flood control, water supply, and fisheries as well as sustainable watershed management. According to the Feasibility Study, the revenue from electricity sales of the lower dam hydropower plant could be about 40 million USD/year (after 5 years) and 90 million USD/year (after 10 years) and the economic internal rate of return of the dam and HPP was assessed at 11.3% during the feasibility phase. The SRBDP will pay attention to the legal and financial arrangements for management of the joint capital investments, especially the sharing of costs and benefits from the hydropower schemes. These steps and economic returns further underline the innovative and sustainability aspects of this intervention.

The institutional arrangements and joint ownership and management measures exemplified in the Ten Year SRBDP and the Commission display great potential for up-take and sustainability. The preparation of Commission work plans will identify the SRBC's needs in terms of tools, human resources, finances, etc. Successful outcomes and improved social, economic and environmental indicators - coupled with an effectively working Secretariat - will be the incentives needed to maintain the program over time. Enhancements in food, crops and local incomes will serve as incentives to maintain the preservation of the environmental sphere. The Commission steering committee formed also by local stakeholders will allow for greater input by diverse actors, always a better recipe for success.

The SRBDP is a comprehensive, wide-ranging program. Government buy-in and support for its realization are crucial to its success. Government buy-in has been secured from the start: the process began decades ago with a push from the countries themselves to stabilize the river course, then focus on basin-wide development, and was made possible with initial financing from the AfDB AWF. Furthermore, strong indication of interest from other donors, development partners and private sector exists and will be secured in the coming year. The initial Feasibility Study had suggested a partnership to support the program consisting of international financial institutions, the private

sector, and the donor community. The Partnership was initiated in meetings held in early 2015 to introduce the program to potential financial partners. A donor conference will be held in 2016 to garner more interest and financing. It is expected that financial partners and investors will agree to form a Songwe River Basin Partnership Forum. Such a Forum will sustain momentum, strengthen collaboration and resource mobilization, and create a platform for up-take of lessons learned and dissemination of knowledge gained. The SRBDP will serve as an example nationally, within the region, and across the continent as a successful IWRM project.

2. Stakeholders. Will project design include the participation of relevant stakeholders from civil society and indigenous peoples? (yes ☒ /no☐) If yes, identify key stakeholders and briefly describe how they will be engaged in project design/preparation.

The beneficiaries and main stakeholders of the project will primarily be the communities of the SRB, lying within the seven relevant districts of Malawi and Tanzania. There will also be secondary beneficiaries in the surrounding areas and the two countries as a whole. The institutional stakeholders comprise the SRBC itself; Government, district and local authorities of the basin, community groups (including women and youth), and NGOs (international, national). At national level, electricity authorities, service providers, private sector, and the different consumers will be significant stakeholders of the larger investments of the baseline.

The Shared Vision development process strived to ensure broad-based stakeholder engagement, among them the central and local governments, private sector and CSOs as well as the different communities within the basin on both sides of the river. All seven districts were covered under this comprehensive dialogue process. Underlying the Vision process were the following overall values and principles: full stakeholder involvement in consultations and dialogue; people centered and private sector driven economic growth and effective cooperation between various stakeholders in the Basin; social justice and equity; gender considerations and responsiveness.

This highly participatory process will continue during full project preparation and implementation. Local communities, NGOs, private sector and technical services from various ministries (besides those responsible for environment and water resources) will be involved in the development and implementation of activities and the broader implementation of the Program. Local communities and CSOs in particular are expected to contribute especially to the design, implementation and monitoring of the land and water based demonstration activities and local capacity building. Details will be determined during PPG.

As regards institutional aspects, the SRBC will be established in 2016 after final ratification of the Convention in the two Parliaments (i.e. it will not be "interim" anymore). The organizational structure of the SRBC will consist of Joint Council of Ministers, Joint Steering Committee, and a Secretariat responsible for the day to day activities. For smooth transition, an interim arrangement, known as Interim Secretariat for the SRBC (IS-SRBC) was instituted in late 2015 to operate for a maximum of three years until the Commission can be fully operational. The IS-SRBC is responsible for mobilizing funds for the SRBDP, pushing for the full establishment of the SRBC, and ensuring implementation of early activities. The IS directly reports to the Project Executing Agency, the Ministry of Agriculture, Irrigation and Water Development of Malawi. The IS personnel will be integrated in the SRBC as soon as it is fully functional. The GEF activities will be managed by these same entities, and will be critical to their operational success.

Some specific stakeholders to be involved in components but determined during the PPG stage are: SRBC; Ministries of Water and Agriculture of both countries; District Councils of the seven districts involved; Regional Forestry Offices; District Agricultural and Land Husbandry Departments; agricultural universities (for monitoring yields and inputs, etc.), and international partners (e.g. IUCN).

3. Gender Considerations. Are gender considerations taken into account? (yes ☒ /no☐). If yes, briefly describe how gender considerations will be mainstreamed into project preparation, taken into account the differences, needs, roles and priorities of men and women.

The ultimate aim of the SRBDP is to provide effective support for enhancing the productive potential of the basin.

Poverty is not just a condition of low income but of vulnerability, exclusion and powerlessness, and it affects different segments of the population and households in different ways. The project will promote active involvement of women in demonstration activities, gender-disaggregated analysis, knowledge and monitoring, so that benefits trickle down to all, especially the most vulnerable.

80% of the basin population comprises rural poor. High population growth rates due to birth, migration and influx of refugees in certain parts of the basin have been issues impacting service delivery and resource conservation. In recent years, HIV/AIDS has had a devastating impact especially in Karonga, Mbeya and Kyela districts. It has led to an increase in the number of orphaned households, poverty levels and accompanying school dropout rates, and food insecurity, issues which affect women in particular. Impact from HIV/AIDS, deteriorating access to health services, lacking social infrastructure, inadequate education facilities, insufficient primary health care, growing unemployment, and rural-urban migration are major problems and circumstances which have worse consequences on the female population in the SRB.

The immense SRB resource potential can be utilized to improve the living conditions for men, women, children, elderly, and youth. Shared Vision 2050 policy area number five on governance, institutions and policies emphasizes the need for "An empowered and gender sensitive community that observes the rule of law and human rights, well integrated institutional framework enabled by a policy environment that facilitates the community involvement in the management of resources". Improved living conditions will logically follow improvements in social services for greater health, food and nutrition security which will particularly benefit women.

There is lack of gender-disaggregated data in the SRB. Women's contribution to socio-economic development is not registered while men dominate in economic activities, local decision-making, as well as in ownership of assets. Women will be a key stakeholder group in the project. Demonstration activities will be designed to contribute to gender empowerment within communities and gender mainstreaming into decision-making processes will be sought. To ensure this, information will be gathered during the design phase on differentiated gender roles, needs, and challenges, and on women's unique roles in the stewardship of natural resources and support to households and communities.

The IW project will promote gender mainstreaming from the earliest stages of the project cycle. A preliminary gender and social analysis will be undertaken as part of the PPG and a set of suitable gender sensitive indicators will be developed to measure progress throughout the project, so that results are tracked accordingly. The gender analysis will be incorporated into the project design and will define more specifically how gender considerations will be taken into account. This will also help assure that gender aspects are part of the social analyses during SRBDP preparation, and investments are designed to take differentiated roles into account. Needs assessment will be done at the project development phase and be used to define the roles of women and men early on. The knowledge and active involvement of women and youth can make the project more resilient and adaptive to changes, especially in highly vulnerable areas, and increase success rates for the project both in terms of socio-economic and environmental indicators. There is a mutually reinforcing effect between objectives on improving the environment, enhancing economic benefits and improving the role of women in project formulation and implementation.

Gender considerations are critical to sustaining development outcomes of investments in shared water systems. Specific gender promotion activities will include: producing and analyzing gender-disaggregated data throughout project implementation; strengthening the position of women's groups in agricultural production and processing, and in project committees; facilitating women's access to factors of production; promoting gender-sensitive infrastructure (e.g. irrigation facilities); ensuring equal access by men and women to information, capacity building trainings and awareness campaigns; and gender mainstreaming within institutional capacity building activities.

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

Key risks to the program relate to: (i) operational challenges faced by stakeholders and key partners when engaging

in transboundary and integrated participatory approach programs; (ii) potentially competing priorities from economic development and conservation that can change over time; (iii) inadequate mobilization of funding for the SRBDP; (iv) uncertainty at local level about new technologies or income generating activities; and (v) environmental impacts from capital investments and climate change (habitat damage, flooding and reduced/variable rainfall).

Some operational problems that the project could face and potential threats for achieving good governance (at project and Commission level) are limited administrative capacity, especially on integrating social development and conservation focused activities, financial constraints, low accountability, lack of transparency and inadequate stakeholder participation in the development process. This situation can be exacerbated by limited knowledge about rights or lack of appreciation for such institutions, policies and rights in the societies. The project will strive for good planning and capacity building will target each of these deficiencies at all levels to create skills and informed managers in national institutions.

For an IWRM project, inadequate cooperation by one or all countries in implementation is a potential threat to the attainment of successful program outcomes. To mitigate this risk, the binding MoU and the Convention establishing the basin Commission, both aimed at fostering continued cooperation between Malawi and Tanzania, have been prepared and signed. The SRBDP also responds to the SADC Protocol on Shared Watercourses that stipulates joint development and management of shared watercourses. As such, a legal context exists to guide the cooperative process and attenuate risks of poor involvement or management. GEF funds will further promote cooperation and capacity building of relevant institutions.

Inadequate mobilization of funding for capital investments and concurrent or preparatory socio-economic projects is one of the major risks facing programs like the SRBDP. As a mitigation measure, the Forum for Financial Partners will be established to advocate and mobilize adequate financial resources. The Basin Commission, the Bank's country offices in Malawi and Tanzania, and the AfDB Regional Departments will participate in the functioning of the Forum and raising additional resources.

Economic, social and environmental assessment for the SRBDP have already been completed for the main investments that required detailed design and tender documents (including the dam, HPP and irrigation). One major task to be performed under the DDIPP project, which was the direct predecessor to the ten year SRBDP, and the IW project as well, was the preparation of a Strategic Environmental & Social Assessment (SESA) and an Environmental & Social Impact Assessment (ESIA). The SESA and the ESIA were requirements for the approval of the various sub-projects to be implemented under the SRBDP, as per AfDB policies. The SESA addressed basin-wide issues, while the ESIA project-specific, based on the general framework provided by the SESA. It is also important to note that the ESIA included the preparation of associated mitigation plans/strategies, and compensation schemes for each program intervention. The assessments are basin-wide and evaluate the potential and likely impacts (positive and negative) of activities and propose mitigating measures to limit or minimize adverse impacts. An environmental screening was done aiming to identify those issues of high significance under the particular conditions of the projects and the local environment.

The assessments comprised the following tasks and objectives:
For the SESA:

- Identification and assessment of the overall and cumulative impacts to be expected as a result of the implementation of the SRBDP; identification of appropriate measures to mitigate any negative environmental and/or social consequences of the proposed Program (positive and negative) as well as mechanisms for ensuring equitable benefit sharing and optimisation of positive synergies;
- Inclusion of the SESA recommendations in the SRBDP;
- Ensure that findings and recommendations are well understood by all concerned authorities and stakeholders, and that the proposed mitigation measures are appropriately addressed and fully included in the development plans and institutional frameworks underpinning program implementation from the earliest stage of decision-making on a par with social and economic considerations.

For the ESIA:

- Scoping and updating of the baseline information legal and institutional environment;
- Socio-economic impact analysis including assessment of possible impacts on the social, cultural and human environment of each of the specific SRBDP sub-components and recommend mitigation measures;
- Bio-physical environment impacts assessment of the SRBDP projects (see below for a list of issues that guided this assessment) and recommend mitigation measures to reduce the potential impacts on water and other natural resources;
- Preparation of a Socio-Environmental Management Plan, including budgeted monitoring and evaluation programs for both the construction and the operational phases of the SRBDP, and detailed design of compensation schemes for all sub-projects.
- Incorporating mitigation measures into the SRBDP design and future operations;
- Provide the Governments of Malawi and Tanzania with advice on how the project detailed design or plan may be changed or adapted to avoid or mitigate negative impacts and to better capture anticipated environmental and social benefits.

Bio-physical Environment impacts considered by the ESIA:
- Impacts of the project interventions on water quality including sediment content/transport and erosion;
- Impacts of projects on down-stream hydrology and estimation environmental flow needs;
- Impacts of projects on vulnerable animal and plant species; ecological connectivity/fragmentation issues concerning aquatic fauna (special focus on fish) due to dam wall;
Impacts of projects on other flora/fauna due to other project-originating infrastructure and; pests (impact on and from the Project);
- Impacts on biodiversity resources in the river basin area, especially presence of any species of conservation value or special conservation;
- Impacts of the project interventions on water and sanitation related morbidity; environmental problems in the project area; wetland degradation and water pollution; project design parameters and impacts on soil, air and water resources for the river basin and Lake Malawi/Nyasa;
- Identification and prediction of the impacts of the Project on pollution of land and water by agro-chemicals (pesticides and fertilisers), changes in water quality due to irrigation and drainage, changes in surface and ground water and incidence of water-borne and water-related diseases;
- Impacts of discharge of sediments and the magnitude of the changes in water quality projected quantitative changes in beneficial uses, such as fisheries, industrial use etc. sanitation and public health benefits anticipated;
Impacts of the project interventions on fish resources of the Songwe River, including their ecology, feeding and breeding biology. Extinction of some fish species due to increased siltation (disturbance to the aquatic environment).
- Need to analyse the extent to which the natural aquatic environment will be disturbed as a result of project activities and which important species could be affected. Determine the actual value of fish in the Songwe;
- Determine the environmental flows required to sustain the downstream uses and ecology including biodiversity.

The GEF IW project will contribute to minimizing anticipated or potential adverse environmental impacts of the larger program (mainly from construction of the dam and HPP) as assessed during feasibility. These impacts could influence the balance of Songwe ecosystems, result in temporary degradation of natural terrestrial flora and fauna habitats, and see the taking of some farmland. Such impacts could cause ecological loss and economic displacement if remedial actions are not taken. GEF will assure that decisions are taken cooperatively and early planning and information sharing on expected benefits are appropriate. NGOs and local organizations will be involved with experience in community development and planning, sustainable livelihood activities, NRM, etc. so that there is better reach and acceptance locally of new measures. The project will remain highly participatory and emphasize equitable benefits. Despite some potential short term adverse impacts, the aim of the program is a much longer, positive trend in ecosystem conservation and socio-economic development, with more balanced benefits and reduced conflict among differing water uses. The IW project will help ensure such a balance is sought and - given it comes at the start of the ten year SRBDP - lay the foundation for pursuing IWRM and ecosystem based basin-wide management. The SRBDP is meant to tackle current environmental degradation and resource depletion trends, which if left unabated will exacerbate ecosystem loss and poverty.

An overall valuation made recently of the ten year program concludes that the present situation - with no SRBDP - constitutes generally the worst-case scenario for the environment and the people living in the area. From the ESIA, some large conclusions can be drawn. The general impacts of the larger program will differ from construction to operational phase with effects on both the biological and socio-economic setting. The magnitude of impact will depend on the extent and duration of construction activities, and whether good planning and mitigation measures are enacted from the start. Habitat and vegetation loss will be mainly associated with construction activities, such as access roads, quarries, labor camps, transmission lines, power station and workforce camp, etc. However, to note, the risks from the multi-purpose dam have been determined to be manageable because the dam will be located in a mountainous area with a limited population and in the downstream part of the basin, thus impacting only a limited stretch of the actual river. Resettlement of some people wil occur but this has been estimated to only involve about 60 households. A resettlement and compensation plan is already in place as per AfDB policies. Moreover, in order to prepare for the influx of workers that will come into the basin area, the SRBDP sub-programs on community and socio-economic infrastructure development (schools, health centers, water supply points) are meant to support this inflow.

With regard to aquatic ecology and wetlands, the dam and irrigation projects could have adverse ecological risks, since they concern environmentally sensitive areas (e.g. fish spawning areas). GEF will ensure that a more complete analysis of this risk is pursued, including of impact of flows on Lake Malawi, and effective design, management and mitigation planning is done. The GEF project will help establish and pursue regular environmental monitoring methods, and develop an environmental management and monitoring program. There is also a possibility that fish numbers and aquatic biodiversity will actually increase at the dam sites due to the planned formation of reservoirs. Water supplies and better management, plus reduced land based contamination, will positively improve the provision of water and also sanitation. The overall impact on aquaculture can therefore be positive in that it may lead to increased income and reduce pressure on natural resources.

As an example, for the water related social infrastructure to be built under the SRBDP, the SESA and ESIA included assessments of: rural electrification and water supply development potential and effects on communities; and fisheries and fish farming development, including aquatic environment and fish stock analyses, and identification of sustainable and appropriate technological and institutional options for fisheries development in the river basin, and analysis of the effects (positive and negative) of the planned flood control measures and altered water discharge into the river on fish habitats, fish stock development and fish migrations. The ESIA found that aquatic habitats are currently adversely affected by an increased sediment load, which results from soil erosion in the catchment area, and by increasing risks of water pollution due to human activities and lack of sanitation measures. The growing population's search for livelihoods leads not only to overexploitation of the terrestrial ecosystems, but also aquatic. A lack of opportunities puts increasing pressure on fisheries as well, and over-fishing and unsustainable fishing practices are common and threatening the populations of the most valuable fish species of the Songwe River. The seasonal and permanent wetlands/swamps and riparian vegetation of the lower basin have been reported to be decreasing and degrading due to the expansion of riparian cultivation. As such, a situation of no action is more serious and risks worse environmental degradation.

Effective management and mitigation of these impacts will be required. This will include careful planning of fisheries enhancement measures, and regular monitoring, since a number of impacts (e.g. species composition, water quality of reservoirs) cannot be precisely predicted beforehand. Moreover, the impacts on fish spawning areas will also require further mitigation. Considering that overfishing and use of destructive fishing techniques are currently the greatest threat and causing declining fish stocks in Lake Malawi and in the Songwe River, measures to support the management of more sustainable fisheries could be an option as an offset for adverse impacts.

The SRBDP, although expected to cause some loss of local habitats, has strong potential to contribute to socio-economic and environmental benefits, especially if sustainable options are implemented, with considerations for halting or minimizing risks alongside actual conservation. The magnitude of the impact in any case would be less than in the present situation. Moreover, the GEF project will not only help to mitigate potential degradation of habitats resulting from the SRBDP; these actually lie at the heart of its intervention. The SRBDP stands on the belief that local development depends on sustainable NRM and a greener path to growth. Positive impacts of stabilizing the

catchment and decreasing soil erosion will be reduced sedimentation into the riverbed and lake. Reduced flooding and drought mitigation, resulting from the dam, reservoir and soil and water conservation activities, makes the project a climate resilience mechanism as well, increasingly important for the coming decades. Also, climate change will be mainstreamed into the Vision and training activities for better awareness of risks and response strategies.

While the planned infrastructure could cause adverse impacts on natural ecosystems, the program will have a greater positive impact on meeting the needs of present and future generations (as regards energy, water, food, etc.). Environmental mitigation and management have the potential to ensure that design, implementation and operation of the infrastructure projects are better aligned with protection objectives. The GEF project will promote these very objectives, while the positive outcomes on micro and macro environments and the program's contribution to adaptation and mitigation will cumulatively far outdo the expected adverse impacts.

5. Coordination. Outline the coordination with other relevant GEF-financed and other initiatives.

The project will link with ongoing initiatives and other partners operating in the SRB and in Lake Malawi by learning from lessons and building on achievements, thus supplying additional knowledge and tools on adaptive ecosystem-based transboundary management. During the PPG phase, in-depth consultations will be undertaken with identified organizations (including IUCN) to establish potential partnerships and modalities for linking collaborative initiatives so that continued progress is made. The GEF IW project will be informed by lessons learned from the implementation of a number of projects supported by the AfDB and other donors in the SADC region. These projects include the Shared Watercourse Support Project for the Buzi, Ruvuma and Save River Basins; the SADC Open and Distance Learning Capacity Building Project; the SADC Regional Water Supply and Sanitation Program financed by the AWF; and the Groundwater and Drought Management Project financed by the World Bank and implemented by SADC.

Previous financings include a project from the WWF and the Swiss Development cooperation called the Songwe River Transboundary Catchment Management Project (Tanzania-Malawi) (SRTCMP) which ended in 2010. The goal was to enhance the sustainable use of natural resources in the Songwe river basin and minimize adverse impacts on the river and lake ecosystem, thereby improving human livelihoods and contributing to poverty reduction. The purpose of an SRTCMP phase II project was: Sustainable and integrated water resources management system with respect to land, forest and fisheries in place in selected areas. An extensive evaluation was made of this project and AfDB will build upon its conclusions and recommendations, for example, on the stated observation that gender was not sufficiently considered, that SLWM investments were not extensive enough for true impact, and the demonstrated positive outcomes in linking conservation and livelihood activities (e.g. conservation was connected to improved crop yields). The project provides a firm foundation for the designing of the larger SRBDP where the sustainability of the WWF/SDC activities could be perpetuated, replicated and integrated into the future program implementation.

There is a current GEF funded LD project for Tanzania under preparation by UNEP (GEFID 5691) "Sustainable Land Management of Lake Nyasa Catchment in Tanzania" whose objective is to improve natural resources management and livelihoods of communities in Lake Malawi/Nyasa catchment through sustainable land management systems. AfDB will liaise with UNEP to see complementarities and synergies between the two projects focused on the same catchment, and explore opportunities for the continuation of the SRTCMP and its inclusion into the new Songwe basin program. Additional useful initiatives for collaboration and lessons learned could be those involving the Shire River (the only outlet of Lake Malawi) and its catchment, such as two AfDB and World Bank irrigation projects for the Shire Valley, and two GEF funded projects, one LD and one multi-focal, in the Shire River Basin (SIP: Private Public Sector Partnership on Capacity Building for SLM in the Shire River Basin, UNDP GEFID 3376; and Shire Natural Ecosystems Management Project, WB GEFID 4625. IUCN is also a strong partner in the region, particularly on Lake Malawi, and possible collaboration options will be sought as part of the PPG phase.

6. Consistency with National Priorities. Is the project consistent with the National strategies and plans or reports and assessements under relevant conventions? (yes ☒ /no☐). If yes, which ones and how: NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, etc.

The SADC Protocol on Shared Watercourses was a key strategic instrument for the preparation of the Shared Vision 2050. The SRBDP is part of the SADC Regional Strategic Action Plan for IWRM aimed at fostering cooperation and equitable sharing of benefits accrued from the joint management and development of the shared, cross-border watercourses. The Project also aligns well to the focal intervention areas of the Africa Water Vision 2025 for Equitable and Sustainable Use of Water for Socio-economic Development and the priorities of AMCOW and NEPAD on strengthened cooperative frameworks for TWRM, structural investments to enhance water and energy security, and adaptation to climate change and variability. The SRBDP's strong connection to NEPAD is also consolidated by the cooperation between AWF and NEPAD-IPPF.

The IW project is fully consistent with the SRB Shared Vision 2050: "A River Basin that continuously experiences improved quality of life among the local communities through sustainable use of basin resources while ensuring that economic growth rate is above population growth rate." It contributes to improved environmental and living conditions in the basin and socio-economic development through the promotion of collective management of the transboundary system and sustainable use of natural resources. The impact of the project will support the objectives of the SRBDP strategy and the Shared Vision 2050, and will be fulfilled in terms of reduced poverty, increased resilience of basin populations to changing natural and socio-economic conditions, minimised impacts of floods and droughts, reduced loss of land, increased agro-ecosystem productivity, and reduced risks of water disputes.

The goals and strategies formulated in the Shared Vision 2050 were assessed for compatibility with the objectives of existing environment-related policies of both countries. The long term direction of the Shared Vision 2050 is set around five pillars referred to as policy areas. The GEF IW project resonates with each pillar but particularly falls in line with pillars one, two and five on: i. Ecosystems, natural resources and environment focusing on resource management, protection and conservation; ii. Production and income generation which focuses on natural resources utilization; v. Governance, institutions and policies with a focus on development and harmonization of policies, institutions and implementation machinery. The vision statement of policy area 1 is particularly relevant: "Basin societies have a broad and sustained diversity of natural resources (soils, vegetation, water, wildlife, etc.) constituting the basin's natural capital assets that are properly harnessed to enhance social, human and financial capital to alleviate poverty." In its quest to enhance basin protection and the livelihoods of basin populations dependent on the natural resource base through enhanced IWRM/INRM, the IW project is fully aligned to this vision.

An assessment of compatibility of the SRBDP with existing national policies was done as part of the SESA. The results showed that the proposed Shared Vision strategies which aim towards implementing better water supply, sanitation, pollution control, better management of fish resources, soil and water conservation, and reduced deforestation are well aligned with the National Environmental Policies, the National Water Policies, the National Forest Policies, the Fisheries Policies, Wildlife Policies, Land Policies of both countries, and the National Energy Policy for Tanzania (for the latter considering the high importance that preservation of forest and woodland vegetation has for the energy supply). The IW project thus also falls within this larger framework of consistency too. The program is clearly prioritized by the Government of Malawi in its Public Sector Investment Program. It is aligned with both countries' policies, strategies and programs for food security and poverty alleviation, and more sectoral programs on agriculture, irrigation, energy, etc. These include the countries' agricultural sector development strategies, with the land and water conservation activities to be channelled through the District Agricultural Development Plans.

The Project will equally be aligned to the countries' policies on watershed management, land-use planning, water reservoirs development for improved water security and reduced floods and droughts, as well as strategies on irrigated agriculture, water supply, sanitation and fisheries development. In order to obtain the necessary permits, the Project will cooperate with the relevant regulatory authorities of the two countries, such as the Malawi Energy Regulatory Authority (MERA) and the Energy and Water Utilities Regulatory Authority (EWURA) in Tanzania. With the predominantly agricultural livelihoods in the basin and the use of wood and charcoal as main source for energy, population growth is a major driver of land degradation and deforestation in the catchment. As such, reducing population pressures and environmental stressors through more sustainable land, water and forest conservation aligns the project to the country's agriculture and energy strategies.

The two Governments are currently implementing national Water Sector Reforms that will strengthen their IWRM capacity and benefit the joint management of the SRB. In Malawi, the reforms fall under the National Water Development Program and, in Tanzania, the Water Sector Support Project (WSSP) 2007-12, under the Water Sector Development Program (WSDP 2006-25), plays a key role. For Malawi, the project will contribute to the reduction of poverty and achieve the objectives of the Malawi Growth and Development Strategy (MGDS), in line with the AfDB Results Based Country Assistance Strategy. The intervention will respond to the Government's emphasis in the MGDS on infrastructure development to improve the quality of services for communities in the zone of influence and contribute to poverty reduction. In Tanzania, the National Strategy for Growth and Reduction of Poverty (NSGRP) commits the nation to achieving access to safe water supply, sustainable environment and food security and poverty reduction. As such, the Vision, SRBDP and IW project are in line with these strategies and priorities.

The project is consistent with the AfDB Long Term Strategy, particularly its focus on fostering a transition to green growth that will protect livelihoods, improve water, energy and food security, and promote the sustainable use of natural resources. It is also very inclusive, supports regional economic integration as well as private sector development. It has the potential to be a major green, inclusive, multi-sector and transboundary project. At Bank level, it is believed it could be considered a flagship 'One Bank' project given its nature.

The Project is an important and well justified initiative for IW funding considering the many transboundary water challenges facing the Songwe River Basin. The Project will enable effective transboundary water governance and joint development of the shared catchment and needed investment. This will have bearings on the political and socio-economic activities in the Basin, its biodiversity and landscape health, and is expected to contribute to enhancing adaptation to the effects of climate change and variability. It therefore also aligns well to objectives expressed in the two country's NBSAPs, UNCCD NAPs, and NAPAs. Many of the project activities are consistent with national adaptation priorities, including increasing agricultural productivity and resilience through SLWM technologies, strengthening hydro-meteorological monitoring systems and upgrading water infrastructure for increased storage and flow regulation capacity.

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

Knowledge management, information sharing and best practice exchange will be important elements and will be included as project outcomes and outputs. Knowledge products and communication materials produced by the project, including training tools and publications documenting best practices, will be widely shared to stakeholders through the project and/or partner information avenues. The project will produce knowledge products on key innovations developed and implemented, such as on catchment protection and transboundary development. An M&E system (gender sensitive) will also be set up along with a communication plan to enhance the knowledge management aspect. Project experiences and lessons from joint management, public participation and environmental education on transboundary waters will be promoted in cooperation with GEF IW:Learn website and its networks, possibly even associated events, where the project and its results can be presented. Furthermore, the project can be featured on AWF, NEPAD, and AfDB communication tools. Stakeholder consultations will include regular information exchange.

Management of the SRBDP will be more effective through the preparation of annual and periodic work plans and progress reports, ensuring that operational resources are provided and managed according to the Government and donor rules and procedures. Monitoring of performance will be made based on established performance indicators, and ensure that financial audits are conducted and provide support for the functioning of the Government's oversight bodies and the partner supervision team.

The environmental and social assessment report for the SRBDP reviews the national monitoring systems for environmental and social issues and recommends indicators for monitoring the environmental and social macro-level changes that may be induced by implementing the SRBDP. Indicators proposed for monitoring cover: long-term environmental changes (land cover / land use changes; agricultural production; forest resources; biodiversity);

watershed protection / soil degradation (fisheries; chemical water pollution; status of river morphology); elements for monitoring long-term socio-economic developments (health services and status; food security and poverty; literacy; access to safe water and sanitation; access to electricity; employment; support services). The GEF project will lay the foundation for monitoring program success against these indicators.

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

A. RECORD OF ENDORSEMENT[10] 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 SGP OFP endorsement letter).

NAME	POSITION	MINISTRY	DATE *(MM/dd/yyyy)*
Ms. Shamiso NAJIRA	Chief Environmental Officer, Environmental Affairs Department	MINISTRY OF NATURAL RESOURCES	March 4th 2016
Dr. Julius NINGU	Director of Environment	VICE PRESIDENT'S OFFICE	March 4th 2016

B. GEF AGENCY(IES) CERTIFICATION

This request has been prepared in accordance with GEF policies[11] and procedures and meets the GEF criteria for project identification and preparation under GEF-6.

Agency Coordinator, Agency name	Signature	Date *(MM/dd/yyyy)*	Project Contact Person	Telephone	Email
Mahamat ASSOUYOUTI		03/03/2016	Daniel VEDEIL	00-277-917-645-00	D.VERDEIL@AFDB.ORG

C. ADDITIONAL GEF PROJECT AGENCY CERTIFICATION (APPLICABLE ONLY TO NEWLY ACCREDITED GEF PROJECT AGENCIES)

For newly accredited GEF Project Agencies, please download and fill up the required **GEF Project Agency Certification of Ceiling Information Template** to be attached as an annex to the PIF.

[10] For regional and/or global projects in which participating countries are identified, OFP endorsement letters from these countries are required even though there may not be a STAR allocation associated with the project.

[11] GEF policies encompass all managed trust funds, namely: GEFTF, LDCF, and SCCF