GEF-6 PROGRAM FRAMEWORK DOCUMENT (PFD)

TYPE OF TRUST FUND: GEF Trust Fund

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PART I:

PROGRAM IDENTIFICATION

Program Title:	Fostering Sustainability and Resilience for Food Security in Sub-Saharan Africa – An Integrated Approach		
Country(ies):	Burkina Faso, Burundi, Ethiopia, Ghana, Kenya, Malawi, Niger, Nigeria, Senegal, Swaziland, Tanzania, Uganda	GEF Program ID:[1]	9070
Lead GEF Agency:	IFAD	GEF Agency Program ID:	
Other GEF Agenc(ies):	UNEP FAO UNDP WB CI UNIDO	Submission Date: Resubmission Date:	20 March 2015 17 April 2015
Other Executing Partner(s):	Numerous: see child projects	Program Duration(Months)	60
GEF Focal Area (s):	Multi-focal Areas	Program Agency Fee ($):	9 572 336
Integrated Approach Pilot	IAP-Cities ☐ IAP-Commodities ☐ IAP-Food Security ☒		
Program Commitment Deadline: June 2016			

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

Objectives/Programs (Focal Areas, Integrated Approach Pilot, Corporate Programs)	**Expected Outcomes**	**Trust Fund**	**Amount (in $)**	
			GEF Program Financing	**Cofinancing**
IAP-Food Security, LD-1, Program 1, Program 2	**Outcome 1.1** Improved agricultural, rangeland and pastoral management **Outcome 1.2** Functionality and cover of ecosystems maintained **Outcome 1.3** Increased investments in SLM	GEFTF	31 425 334	213 466 252
IAP-Food Security, LD-3, Program 4	**Outcome 3.1** Support mechanisms for SLM in wider landscapes established **Outcome 3.2** Integrated landscape management practices adopted by local communities **Outcome 3.3** Increased investments in integrated landscape management	GEFTF	24 270 196	184 878 346
IAP-Food Security, LD-4, Program 5	**Outcome 4.1** SLM mainstreamed in development investments and value chains across multiple scales **Outcome 4.2** Innovative mechanisms for multiple-stakeholder planning and investments in SLM at scale	GEFTF	19 476 729	206 943 431

[1] Program ID number will be assigned by GEFSEC.

[2] When completing Table A, refer to the excerpts on *GEF 6 Results Frameworks for GETF, LDCF and SCCF*.

IAP-Food Security, BD-3, Program 7 (select)	**Outcome 7.1** Increase genetic diversity of globally significant cultivated plants and domesticated animals that are sustainably used within production systems	GEFTF	2 655 028	5 800 000
IAP-Food Security, BD-4, Program 9 (select)	**Outcome 9.1** Increased area of production landscapes and seascapes that integrate biodiversity conservation and sustainable use into their management **Outcome 9.2** Sector policies and regulatory frameworks incorporate biodiversity considerations	GEFTF	16 565 161	114 586 881
IAP-Food Security, CCM-2, Program 4 (select)	**Outcome A** Accelerated adoption of innovative technologies and management practices for GHG emission reduction and carbon sequestration **Outcome B** Policy, planning and regulatory frameworks foster accelerated low GHG development and emission mitigation	GEFTF	11 966 842	79 686 730
	Total Program Costs		106 359 290	805 361 640

B. INDICATIVE PROGRAM RESULTS FRAMEWORK

Program Objective: Support countries in target geographies for integrating priorities to safeguard and maintain ecosystem services into investments improving smallholder agriculture and food value chains (Target 12 countries; 10 million ha of production landscapes; 2-3 million beneficiary households)

Program Component	Financing Type[3]	Program Outcomes	Trust Fund	(in $)	
				GEF Project Financing	Co-financing
1. Institutional frameworks for influencing sustainability and resilience	TA	1.1 Multi-stakeholder and multi-scale frameworks in support of policy and institutional reform to facilitate the upscaling of integrated natural resources management in place **(LD-4, Program 5; BD-4, Program 9)** *Indicators and targets:* • Functioning national level multi-stakeholder frameworks in place in at least 10 countries; at least 5 at local/landscape scale for integrated management in the targeted geographies; at least 3 regional for adaptive management and learning	GEFTF	27 452 498	171 235 603

[3] Financing type can be either investment or technical assistance.

		• South-south exchanges ot multiple scles (local to regional) • Gender and youth sensitive decision-support tools and participatory processes applied (# and type) 1.2 Supportive policies and incentives in place to support smallholder agriculture and diverse and inclusive food value-chains **(LD-4, Program 5; BD-4, Program 9)** *Indicators and targets:* • Value chains integrate sustainable production systems approaches, including consideration of post-harvest losses (# and type) • Supportive policies and incentives for integrated approaches at national level (# and types) • Strengthened involvement of CSOs, farmer cooperatives and private sector in pro-poor and pro-environment value chains to help smallholder farmers to scale up good practices in INRM (# and type)			
2. Scaling up integrated approaches for sustainability and resilience	INV	2.1 Increased land area and agro-ecosystems under integrated natural resources management and SLM, including sustainable soil and water management, diversified production systems, and integrated crop-livestock systems **(LD-1Program 1, Program 2; LD-3, Program 4; BD-3, Program 7; CCM-2, Program 4)** *Indicators and targets:* • 3 million of ha under sustainable land and water management • 3 million ha under diversified production • 4 million of ha of agro-pastoral systems under integrated management • 15-25% increase in number of crops varieties and animal breeds in the production system • GHG emissions avoided and carbon sequestered (10-20 million tons CO_2e)	GEFTF	56 257 183	485 764 624

		2.2 Increase in investment flows to integrated natural resources management from national governments, development partners, the private sector, and innovative funding mechanisms and approaches **(LD-3, Program 4; BD-4, Program 9)** *Indicators and targets:* • X million increase from governments; Y million in increase from development partners • X million in increase from the local private sector; Y number of innovative funding mechanisms/ schemes in place (e.g. PES, PPPs)			
3. Monitoring and assessment of ecosystem services, global environmental benefits and resilience	TA	3.1 Capacity and institutions in place to monitor ecosystem services and resilience to enable more informed decision-making on agriculture and food security at multiple scales **(LD-4, Program 5; CCM-2, Program 4; BD-3, Program 7)** *Indicators and targets:* • Multi-scale monitoring of ecosystem services and global environmental benefits established in all participating countries (# and types at local, national and regional levels) • Institutional and technical capacity strengthened for multi-scale monitoring and assessment of ecosystem services and global environmental benefits (#, types) • Integrated, open access data and information systems in place for enhancement of information accessibility (#, types) 3.2 Framework in place for multi-scale assessment, monitoring and integration of resilience in production landscapes **(LD-4, Program 5; CCM-2, Program 4; BD-3, Program 7)** • Framework for monitoring of resilience established for each target geography	GEFTF	17 909 489	111 287 842

		• Institutional and technical capacity in place to incorporate appropriate tools and practices for monitoring resilience at multiple scales in all participating countries			
			Subtotal	101 619 170	768 288 069
			Project Management Cost (PMC)[4]	GEFTF 4 740 120	37 073 571
			Total Project Cost	106 359 290	805 361 640

If Multi-Trust Fund project : PMC in this table should be the total and enter trust fund PMC breakdown here (LD: 2 700 000; BD: 1 315 920; CC: 1 315 920)

C. CO-FINANCING FOR THE PROGRAM BY SOURCE, BY NAME AND BY TYPE

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Amount ($)
Government	Government of Senegal	In kind	1 655 388
Recipient Government	Government of Niger	In Kind	6 032 000
Recipient Government	Government of Malawi	In kind	7 000 000
Recipient Government	Government of Ghana	in kind	2 000 000
Recipient Government	Government of Burundi through IFAD (PRODEFI)	cash	46 300 000
Recipient Government	The Federal Government of Nigeria	grant	50 000 000
Recipient Government	Government of Swaziland through its loan from IFAD (SLMP)	Loan	8 300 000
Recipient Government	Government of Uganda	In kind	16 000 000
Recipient Government	Government of Swaziland	Loan	21 000 000
Recipient Government	Government of Kenya through it loans from IFAD	Loans	39 400 000
Recipient Government	Government of Tanzania through its loans from IFAD	Loans	32 935 778
Recipient Government	Government of Burkina Faso	tbd	3 450 000

[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.

Recipient Government	Government of Swaziland – Departmental Budgets (SLMP)	tbc	6 600 000
GEF-Agency	World Bank	grant	10 000 000
GEF Agency	World Bank (GCAP parallel financing)	Loans	20 000 000
GEF Agency	FAO	grant	21 000 000
GEF Agency	FAO	In kind	1 400 000
GEF Agency	UNDP	Cash	5 700 000
GEF Agency	UNDP	grant	23 000 000
GEF Agency	UNDP	In kind	1 000 000
GEF Agency	IFAD	tbd	34 780 474
GEF Agency	IFAD	Loan	95 772 000
GEF Agency	IFAD	Grants	117 000 000
GEF Agency	UNEP	in kind	2 000 000
GEF Agency	UNEP	Grants	6 500 000
GEF Agency	UNIDO	In kind and cash	400 000
Non profit	Bill & Melinda Gates Foundation (to Vital Signs USD12 000 000), Mc Arthur Foundation (to VS USD1 000 000), Rockefeller Foundation (to VS USD500 000)	grants	13 500 000
Non profit	NASA (to VS USD2 000 000), CSIRO (to VS USD100 000), Ushahidi (to VS USD500 000)	in kind	2 600 000
Beneficiaries	Beneficiaries	In Kind	8 136 000
SLM Funding by Multiple Development Partners	DFID, Finland, JICA, Netherlands, USAID	Cash	22 000 000
SLM Programme Phase II	World Bank, SLM Trust Fund	In Kind	85 000 000
Donor Agency	EU (USD 5 000 000 via CGIAR)	grant	14 000 000
Private Sector	Nairobi Water Company, East African Breweries, Kenya Power and Light (Kenya), Swaziland	Equity	10 600 000
Other	The Nature Conservancy	tbd	3 300 000
Other	AGRA	Grant	10 000 000
Other	ICRAF	Grant + in-kind	50 000 000
Other	Bioversity	Grant + in-kind	7 000 000
TOTAL			**805 361 640**

D. GEF/LDCF/SCCF RESOURCES REQUESTED BY AGENCY, TRUST FUND, COUNTRY, FOCAL AREA AND THE PROGRAMMING OF FUNDS

GEF Agency	Trust Fund	Country/Regional/ Global	Focal Area	Programming of Funds	(in $) GEF Project Financing (a)	Agency Fee (b)	Total(c)=a+b[1]
UNDP	GEFTF	Ethiopia	LD		4 734 863.00	426 138.00	5 161 000.00

UNDP	GEFTF	Ethiopia	BD		1 834 862.00	165 137.00	2 000 000.00
UNDP	GEFTF	Ethiopia	set aside	IAP food security	3 669 725.00	330 275.00	4 000 000.00
UNDP	GEFTF	Uganda	LD		947 477.00	85 273.00	1 032 750.00
UNDP	GEFTF	Uganda	BD		262 729.50	23 645.50	286 375.00
UNDP	GEFTF	Uganda	CCM		574 656.00	51 719.00	626 375.00
UNDP	GEFTF	Uganda	set aside	IAP food security	1 784 862.50	160 637.50	1 945 500.00
UNDP	GEFTF	Nigeria	LD		847 432.00	76 268.81	923 700.00
UNDP	GEFTF	Nigeria	BD		2 448 807.00	220 392.66	2 669 200.00
UNDP	GEF TF	Nigeria	CCM		173 486.00	15 613.76	189 100.00
UNDP	GEFTF	Nigeria	set aside	IAP food security	3 669 725.00	330 275.23	4 000 000.00
WB	GEFTF	Ghana	BD		2 924 863.00	263 238.00	3 188 101.00
WB	GEFTF	Ghana	CCM		2 212 202.00	199 098.00	2 411 300.00
WB	GEFTF	Ghana	LD		3 962 042.00	356 584.00	4 318 626.00
WB	GEFTF	Ghana	set aside	IAP food security	3 669 725.00	330 275.00	4 000 000.00
FAO	GEFTF	Burundi	LD		1 144 312.00	102 988.00	1 247 300.00
FAO	GEFTF	Burundi	BD		893 431.00	80 409.00	973 840.00
FAO	GEFTF	Burundi	CCM		1 784 862.00	160 638.00	1 945 500.00
FAO	GEFTF	Burundi	set aside	IAP food security	3 573 725.00	321 635.00	3 895 360.00
FAO	GEFTF	Uganda	LD		947 477.00	85 273.00	1 032 750.00
FAO	GEFTF	Uganda	BD		262 729.50	23 645.50	286 375.00
FAO	GEF TF	Uganda	CCM		574 656.00	51 719.00	626 375.00
FAO	GEFTF	Uganda	set aside	IAP food security	1 784 862.50	160 637.50	1 945 500.00
IFAD	GEFTF	Swaziland	LD		2 619 841.00	235 786.00	2 855 627.00
IFAD	GEFTF	Swaziland	BD		450 114.00	40 510.00	490 624.00
IFAD	GEFTF	Swaziland	CCM		540 137.00	48 612.00	588 749.00
IFAD	GEFTF	Swaziland	set aside	IAP food security	3 600 917.00	324 083.00	3 925 000.00
IFAD	GEFTF	Kenya	LD		900 229.50	81 020.65	981 250.00
IFAD	GEFTF	Kenya	BD		450 114.70	40 510.32	490 625.00
IFAD	GEFTF	Kenya	CC		450 114.70	40 510.32	490 625.00
IFAD	GEFTF	Kenya	set aside	IAP food security	1 800 458.50	162 041.30	1 962 500.00
IFAD	GEFTF	Senegal	LD		1 334 863.00	120 138.00	1 455 001.00
IFAD	GEFTF	Senegal	CCM		440 000.00	39 600.00	479 600.00
IFAD	GEFTF	Senegal	set aside	IAP Food security	1 834 862.00	165 138.00	2 000 000.00
IFAD	GEFTF	Burkina	LD		3 599 724.00	323 975.00	3 923 699.00
IFAD	GEFTF	Burkina	set aside	IAP Food Security	3 669 724.00	330 275.00	3 999 999.00
IFAD	GEFTF	Niger	LD		3 003 395.00	270 305.00	3 273 700.00
IFAD	GEFTF	Niger	BD		458 716.00	41 284.00	500 000.00
IFAD	GEFTF	Niger	CCM		504 587.00	45 412.00	550 000.00
IFAD	GEFTF	Niger	set aside	IAP food security	3 669 724.00	330 276.00	4 000 000.00

IFAD	GEFTF	Malawi	set aside	IAP Food Security	3 577 982.00	322 018.00	3 900 000.00
IFAD	GEFTF	Malawi	LD		1 341 743.00	120 757.00	1 462 500.00
IFAD	GEFTF	Malawi	CCM		1 341 743.00	120 757.00	1 462 500.00
IFAD	GEFTF	Malawi	BD		894 495.00	80 505.00	975 000.00
IFAD	GEFTF	Tanzania	LD		894 495.00	80 505.00	975 000.00
IFAD	GEFTF	Tanzania	BD		1 788 991.00	161 009.00	1 950 000.00
IFAD	GEFTF	Tanzania	CCM		894 495.00	80 505.00	975 000.00
IFAD	GEFTF	Tanzania	set aside	IAP food security	3 577 982.00	322 018.00	3 900 000.00
IFAD	GEFTF	Regional	set aside	IAP food security	10 825 688.07	974311.9266	11 800 000.000
UNIDO	GEFTF	Senegal	LD		1 334 863.00	120 138.00	1 455 001.00
UNIDO	GEFTF	Senegal	CCM		440 000.00	39 600.00	479 600.00
UNIDO	GEFTF	Senegal	set aside	IAP Food security	1 834 862.00	165 138.00	2 000 000.00
UNEP	GEFTF	Kenya	LD		900 229.50	81 020.65	981 250.00
UNEP	GEFTF	Kenya	BD		450 114.70	40 510.32	490 625.00
UNEP	GEFTF	Kenya	CCM		450 114.70	40 510.32	490 625.00
UNEP	GEFTF	Kenya	set aside	IAP food security	1 800 458.50	162 041.30	1 962 500.00
TOTAL					106 359 290	9 572 336	115 931 627

E. PROGRAM'S TARGET CONTRIBUTIONS TO GLOBAL ENVIRONMENTAL BENEFITS[5]

Provide the expected program targets as appropriate.

Corporate Results	Replenishment Targets	Indicative ProgramTargets
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	*5 million hectares*
2. Sustainable land management in production systems (agriculture, rangelands, and forest landscapes)	120 million hectares under sustainable land management	*5 million 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;	*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)	*10-20 million metric tons*
5. Increase in phase-out, disposal and reduction of releases of POPs, ODS,	Disposal of 80,000 tons of POPs (PCB, obsolete pesticides)	*metric tons*
	Reduction of 1000 tons of Mercury	*metric tons*

[5] Provide those indicator values in this table to the extent applicable to your proposed program. Progress in programming against these targets for the program 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.

mercury and other chemicals of global concern	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: 10*
	Functional environmental information systems are established to support decision-making in at least 10 countries	*Number of Countries: 10*

PART II: PROGRAMMATIC JUSTIFICATION

1. Program Description. Briefly describe: a) the global environmental and/or adaptation problems, root causes and barriers that need to be addressed; b) the baseline scenario or any associated baseline program/ projects; c) the proposed alternative scenario, with a brief description of expected outcomes and components of the program; d) incremental/ additional cost reasoning and expected contributions from the baseline, the GEFTF, LDCF, SCCF, and co-financing; and e) innovation, sustainability and potential for scaling up.

Through this integrated approach pilot (IAP) program, the GEF is seeking to position the management of natural capital - land, soil, water, vegetation and genetic resources - as a priority in the transformation of the agriculture sector for food security in Sub-Saharan Africa. This program supports 12 countries in Sub-Saharan Africa in integrating management of natural capital and ecosystem services into investments that aim to improve smallholder agriculture and food security. The program adopts a three-pronged approach that: (i) engages stakeholders across the public and private sectors, and across environment and agriculture to foster collective action and coherent policies; (ii) acts to scale up, diversify and adapt practices for a large-scale transformation of agro-ecosystems; and (iii) tracks impacts on ecosystem services and resilience to assess progress and enable more informed decision-making on agriculture and food security at multiple scales. The IAP seeks to tackle major drivers of environmental degradation by advancing a holistic and integrated approach to enhancing agricultural productivity in smallholder systems where food insecurity is directly tied to agricultural output. It builds on existing efforts at national and regional level to address various barriers (policy, institutional, and knowledge) to emphasize a shift toward safeguarding the natural capital that underpins its sustainability and resilience for food security in the long term. As a result, the program will usher in a paradigm shift in African agriculture that emphasizes the importance of natural capital and ecosystem services, which will ensure the long-term sustainability and resilience of production systems, particularly in the drylands.

a) Global environmental problems in SSA Agriculture and root causes:

The challenges to agricultural production and food security in Sub-Saharan Africa (SSA) have been widely documented[6,7]. Cereal yields average only around one ton per hectare and are notoriously low compared with other regions of the world that were part of the green revolution in the 1960s and 1970s, where yields are now at least three times higher than in SSA. Due to low resilience of agro-ecosystems to stressors and shocks, such as increased pressure on land and climate change impacts, yields are even declining in parts of Africa. The seriousness of the situation is exacerbated by the fact that land is the source of employment for 70% of the population and more than 80% of people live in extreme poverty. SSA also has the highest population growth in the world of around 2.1% per annum leading to the doubling of the population within 30-40 years, as well as a rapidly increasing proportion of the population residing in urban places including ever-growing slum communities. This poses unprecedented and as yet poorly understood challenges as well as opportunities for moving toward increased sustainability and resilience of food production systems.

SSA is characterized by a large variety of natural ecosystems which provide a wealth of natural, social, ecological and economical goods and services. The agricultural sector depends on this natural capital – land, soil, water, vegetation

[6] Liniger HP. Mekdaschi Studer R. Hauert C. & Gurtner M. 2011. SLM in Practice – Guidelines and Best Practices for Subsaharan Africa. TerrAfrica, WOCAT and FAO.
[7] UNEP. 2012. Global Environmental Outlook 5: Environment for the future we want. UNEP, 2012.

and genetic resources - for its productivity. *Agro-ecosystems* are ecosystems managed for production of food, fibre and/or fuel, whose boundaries include the ecological and human resources required for production, and the infrastructure, institutions and people across the supply chain. However, in SSA, production landscapes and agro-ecosystems are often unprotected and freely exploited, leading to their degradation and loss of productive functions, a situation which is exacerbated by water scarcity in arid and semi-arid areas and acute land pressures especially in more fertile highland areas and urban fringes. Sustainable agricultural intensification in SSA has largely failed because it has not addressed the depletion of the natural capital important for sustaining productivity. Land cover is decreasing in many agro-ecosystems due to inappropriate cultivation methods and lack of integration of tree crops in the farming systems, leading to increased soil erosion. Soil organic matter is also being lost over large areas due to insufficient return of organic matter to the soils, which in turn causes low response to fertilizers and problems of nutrient depletion, including loss of soil carbon.

This has been coupled with loss of agro-biodiversity - genetic diversity and wild relatives of globally important domesticated species - leading to further loss of *resilience* - the ability of a system to maintain objectives or functions in the face of stressors and shocks - of agro-ecosystems, such as climate variability and change. Crop genetic resources is a major factor in sustaining agricultural production over time, providing an important buffer and "insurance" against external factors like insects and other pests, plant diseases and climatic variability. Lack of genetic diversity leads to a reduction in biodiversity capability to adapt to biotic and abiotic stresses in the environment. This limits current and potential utilization in crops, forest and livestock taxa, which significantly impacts food and nutrition security. In many areas it is not the scarcity of calorie-rich foods that undermines the health and productivity of Africa's poor, but rather a lack of micronutrients that are lost when agro-biodiversity resources are removed. Micronutrient deficiency is often called the "hidden hunger" because it can occur even when diets include an adequate amount of energy (calories). Other obstacles to intensification include limited access to markets, credit and food value chains by the hundreds of millions of smallholders that form the backbone of African agriculture, and poor links between science, policy and action – i.e. the latest knowledge on sustainable agricultural intensification is not being fed into the decision-making process.

Regions that are prone to environmental crises leading to food insecurity include in particular the Sahel region of West Africa, the East African Highlands, the Horn of Africa, and Southern Africa (Annex C, Figure 1). The common pattern across these geographies is a long record of concerns about food security and environmental sustainability associated with the environment-agriculture nexus and the prevailing small-scale extensive farming practices. Food insecurity affects over 30 percent of the populations in most countries in these regions and is even higher in countries such as Burundi (77%), Swaziland (48%), and Ethiopia (44%). However, these regions also present opportunities to scale up good practices from decades of research and investment in agricultural development and have well organized rural producer associations of various types *which can be important mechanisms for upscaling*. The IAP is therefore focusing on these target geographies and their millions of smallholder farmers to catalyze the scaling up of the right mix of interventions to achieve sustainable intensification of agriculture and resilience for food security (See **Annex B** for background information on target geographies).

b) Preferred solution, barriers and baseline scenario and programs:

A preferred, long-term solution to the global environmental problem is to promote pathways of agricultural intensification in smallholder systems that safeguard natural capital for long-term sustainability, and that progressively enhance resilience in the face of climate change and other hazards. In the target geographies, SSA governments and development partners have in recent years been stepping up efforts to increase food production, focusing mainly on smallholder farmers' access to agricultural inputs and markets. Although significant progress has been made, many promising approaches have not been taken to scale, and there are yet no consistent efforts to integrate management of natural capital and ecosystem services into investments that aim to improve smallholder agriculture and food security into these efforts, including the growing risks of climate change. Moreover, interventions aimed at strengthening institutional frameworks and incentives have not been linked to approaches to scaling up focusing on market access and value chains. Monitoring and assessment of impacts of interventions have not incorporated ecosystem services and resilience. Building on past efforts, the IAP will focus on removing barriers to sustainability and resilience of smallholder agriculture for food security in SSA. This includes fragmented policies, lack of coordination across sectors and scales, lack of integrated financing and market opportunities, and inadequate extension and access to knowledge:

(i) Fragmented policies

Fragmented policies, poor governance and weak evidence of the benefits of investing in Integrated Natural Resources Management (INRM)[8] have long been seen as a key barrier to sustainable land management by African governments and their development partners. Introducing greater resilience and sustainability into food production systems will require stronger links between the environment and the agriculture sectors at all levels and harmonization of sectoral policies. Yet nationally and regionally these sectors traditionally have weak linkages. At the regional level, the African Union's (AU) New Partnership for Africa's Development (NEPAD) Environment Action Plan (EAP) and its Comprehensive African Agricultural Development Program (CAADP) has received support through a number of initiatives such as TerrAfrica that has promoted mainstreaming of sustainable land management in policies and institutional frameworks at national level, and supported the development of tools for policy and financing of SLM, and SLM best practices guidelines (e.g. FAO/WOCAT). More recent AU/NEPAD initiatives include the Climate Smart Agriculture Alliance that was launched in 2014 to leverage the partners effort to support scaling up of climate smart agriculture to at least 6 million farm households. The Alliance unites the public sector with research and civil society organizations to scale up on-farm assistance, link to technological advances and support a favourable policy environment.

In addition, any program for food security that is to be sustainable and resilient will need to systematically integrate efforts for managing crop genetic resources, as resilience of food systems is closely linked to the agro-biodiversity that they harbor. Conservation and sustainable use of plant genetic resources for food and agriculture is governed by the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA), which entered into force in 2004. The ITPGRFA is in turn supported by regional and national policies that aim at improving the "formal" system of plant genetic resources conservation and development that will provide smallholders with the varieties needed in food production and value chains. The situation in the affected regions would have to be more thoroughly analyzed, but there is good reason to believe that there are significant gaps in existing knowledge and infrastructure in this field, in other words that countries (and the respective regions) are not adequately prepared to fully reap the potential benefits of the genetic resource base. This will probably be even clearer if one takes the potentials of crop wild relatives of important food crops into consideration.

(ii) Lack of coordination and collaboration across sectors and scales

Addressing barriers to coordination and harmonization across sectors and scales is key to achieve transformational change of African agriculture and to put it on a pathway to sustainable intensification. Links between science and practice across sectors and landscapes need to be enhanced in order to identify common objectives, and to promote evidence-based policy and decision making to inform the scaling up of investments in sustainability and resilience for food security. At the national level, there is still a lack of harmonization and mainstreaming of SLM and agro-biodiversity into expenditure frameworks and appropriate incentive structures for smallholder agriculture. There is lack of appreciation of the fact that environmentally-sound forms of agricultural production can address productivity gaps, while at the same time securing critical ecosystem services (hydrology and climate regulation, nutrient and carbon cycling, pest and disease control, etc.) that underpin sustainability and resilience of agroecosystems. At the regional level, there is a need to synthesize and make the latest scientific and technical knowledge, tools and methods available across sectors and scales, and to properly engage stakeholders from governments, local communities, the private sector and the technical and scientific community in multi-stakeholder coalitions.

There is also clear need for collaborative actions at sub-regional level for coordination and harmonization, interconnected data and information systems, as relevant, to promote wider protection and development of agro-ecosystems and landscapes, particularly across similar ecologies, transboundary highland areas and river and lake basins and grazing corridors. Regional groupings such as *le Comité Permanent Inter-Etats de Lutte contre la Sécheresse dans le Sahel* (CILSS) and *Alliance Globale pour la Résilience - AGIR Sahel et Afrique de l'Ouest*, the Intergovernmental

[8] Sayer J.A and Campbell B: "Integrated Natural Resource Management is a conscious process of incorporating the multiple aspects of resource use into a system of sustainable management to meet the goals of resource users, managers and other stakeholders (e.g. production, food security, profitability, risk aversion and sustainability goals)." The Science of Sustainable Development: Local Livelihoods and the Global Environment. Cambridge University Press, 2004.

Authority on Development (IGAD) and the Drought Resilience and Sustainability Initiative (IDRISSI), and the Southern Africa Development Community (SADC), are already supporting sub-regional efforts to enhance resilience and food security while combating desertification and drought. However, better integration between food security and resilience on the one hand, and environmental agendas on the other are needed. Moreover, there are weak links between Anglophone and Francophone countries, and highland areas are not given sufficient attention.

(iii) Access to finance, markets, inputs and processing technology

In recent years initiatives such as the national agricultural investment programmes (CAADP supported by FAO-World Bank), the Bill & Melinda Gates Foundation, Alliance for a Green Revolution in Africa (AGRA), Rockefeller Foundation, UNDP African Facility for Inclusive Markets (AFIM) and IFAD's Adaptation for Smallholder Agriculture Program (ASAP) have addressed some of the barriers related to access to markets, value chains and finance in SSA. AGRA supports work on value chains on key staple food crops as a means of scaling up integrated soil and land management. This involves developing Public Private Partnerships (PPPs) to address access to input and output markets, essential for farmers to sustainably increase their yields. AGRA's baseline investments amount to a total of US$100 million from sources such as the Bill & Melinda Gates Foundation and the Rockefeller Foundation, with investment largely focused on countries in the geographies targeted by the IAP Program. Through support to inclusive business models, the objective is to include the poor in the value chain as consumers, producers, business owners or employees. ASAP channels US$350 million of climate finance to smallholder farmers to facilitate their access to the tools and technologies that help build their resilience to climate change.

Achieving transformational change of agricultural practices in SSA is hampered by difficulties of scaling up due to the large number of smallholders whose access to agricultural inputs and markets is limited. Hence, they have limited incentives to increase production through sustainable intensification. Regional and local markets offer increasing opportunities for the African agri-food sector through opportunities for expansion of agricultural production and value addition. However, Africa's value chains and agro-industries remain weak, constrained by lack of capital, finance and credit, appropriate post-production technologies, poor infrastructure and inadequate market information that make investments in the agri-food sector risky and less profitable. Post-harvest losses remain high and are indicative of poorly functioning and inefficient value chains. Grain losses of major staple foods in sub-Saharan Africa are worth potentially $4 billion a year and could meet the minimum annual food requirements of at least 48 million people. Recently, the Grow Africa partnership platform has been launched by the African Union Commission, the NEPAD Agency and the World Economic Forum to help catalyze sustainable investment and growth in African agriculture through large scale commercialization. However commercialization objectives must always be cognizant of multiple ecosystem services and limits and of functional landscape diversity in order to provide sustainable benefits for multiple users. Institutional arrangements such as Payment for Environmental Services and Public-Private-Producer Partnerships facilitate such solutions. Building on these baselines, and with incremental GEF support, there is an opportunity to create market demand for environmentally friendly food chains, which has the potential to achieve transformation at scale of African agriculture, leading to both intensified production and enhanced sustainability and resilience.

(iv) Inadequate extension and access to knowledge

Finally, the assistance and adaptation of technologies and knowledge to build a more regenerative, sustainable agricultural production system is not supported by the current extension system in most countries. At the same time the adoption of new technologies involves a change of current practices (farmer level) that in most cases are linked to existing cultural values (food crops) and traditions (agricultural practices). A traditional practice will hardly change if it is effective and still achieves its original purpose. A successful adoption of practices and technologies would hence be difficult if they are not perceived as consistent with existing values, past experiences and the real needs of the farmers. Farmer-led extension approaches, such as the Farmer Field Schools program implemented by FAO, has been able to overcome some of these barriers, by building on local knowledge and empowering farmers and herders. The FFS approach goes beyond a normal training as new practices are tested by the farmers attending the FFS (ownership) in a risk free environment. In this sense try-ability, observability and eventually acceptance lead to successful adoption.

Sustainable agricultural intensification in Africa also requires better data, analytical methods and risk management approaches for evaluating the trade-offs and synergies among policies for food production, poverty alleviation and ecosystem services. Data is fragmented, a variety of measurement methodologies and tools are used that are often not

generating comparable data. Conservation International (CI) has led the development of Vital Signs, which is an open source system to provide better data and support better decision making and policies for agricultural development that tracks major indicators from UNCCD, CBD and UNFCCC, as well as indicators of human, ecosystem and agricultural resilience. Vital Signs includes a statistical framework and protocols, an analytical layer that applies algorithms and models, and a decision-support layer. FAO and UNEP have developed tools for assessment of land degradation and sustainable land management from local to national level and impacts on local livelihoods and on ecosystem services in collaboration with the World Overview of Conservation Approaches and Technologies (WOCAT). The World Agroforestry Center (ICRAF) of the CGIAR system has developed the Land Degradation Surveillance Framework (LDSF), which has been adopted by some countries to provide a biophysical baseline at landscape level, and a monitoring and evaluation framework for assessing soil and ecosystem health. With GEF support added to the baseline investments, these different tools, frameworks and platforms can be further developed and harmonised to provide integrated data, knowledge and decision support for all the IAP target geographies in a coherent and standardized manner. This will enable GEF and governments to track ecosystem service benefits and progress towards improved resilience of the agro-ecosystems (bio-physical) and food security (socio-economic dimension) at multiple scales.

Country baselines (investments):
Baseline projects in pilot countries in the different target geographies are described in **Annex C** and include baseline investments at country level. Many countries have embarked upon **policy and institutional reforms** to promote community-based rural development, and to enhance the engagement of stakeholders across sectors as well as of donors, scientific institutions and the private sector. Nevertheless, baseline support has mainly focused on access to inputs, mechanization, marketing, structuring of actors along value chains and capacity building. Sufficient attention has not been paid to integrating environmental priorities into frameworks for production landscapes to safeguard the natural capital and the provision of ecosystem services vital to enhance sustainability and improve resilience of the production systems and the value chains that depend on them.

The IAP-Food Security has created momentum for integration of natural capital and ecosystem services as priorities in the transformation of smallholder agriculture in SSA. Participating countries have committed to promote the integrated approach for achieving sustainability and resilience, in line with their national development strategies, and their NAPs (UNCCD), NBSAPs (CBD), and National Communications and NAPAs (UNFCCC). For example, Burkina Faso, Ethiopia, Ghana, Malawi, Niger and Tanzania have committed to integrating environmental priorities into national food security and nutrition policies; Burundi into poverty reduction strategies; Ethiopia, Nigeria, and Uganda into green growth and value chain policies; and Kenya, Senegal and Swaziland into local sustainable development and governance policies.

Support is also being provided through the IAP to **scaling up of innovative agricultural practices**, including development of small-scale irrigation to increase the productivity of the farming system during the dry and wet seasons in e.g. Ethiopia, Nigeria, and Swaziland; reducing vulnerability to soil erosion in sub-watersheds through improved land-use planning, erosion and watershed management to protect biodiversity as well as carbon stocks in e.g. Burkina Faso, Burundi, Ghana, Malawi, and Kenya, and there are also links with establishment of Payment for Ecosystem Services (PES) schemes under a Public Private Partnership (PPP), which is a good example of a scheme demonstrating commitment by governments and private sector to work together; development and promotion of sustainable land management and agricultural practices, including improved grazing management linked to market development and value chains in e.g. Ghana, Niger, Senegal, Swaziland, Tanzania, and Uganda. However, baseline scenarios have not sufficiently considered green growth options and investment at watershed level to safeguard important ecosystem services that underpin the sustainability and resilience of production systems. Smallholder farmers' access to finance also need to be improved and critical supply chain bottlenecks removed in value chains by focusing on improved storage and pre-storage processing.

The need to **strengthen monitoring and assessment capabilities** is identified by the majority of pilot countries as a priority to improve evidence-based policy and decision making and to promote replication related to integrated natural resources management, sustainable agriculture and food security. Information and data need to be better integrated across sectors and new and innovative tools are required to build capacity to assess global environmental benefits, sustainability and resilience of agro-ecosystems and food systems. The total direct baseline across Program

components, for all country pilots from national partners and GEF agencies participating in the IAP, amount to more than $800 million. A programmatic approach will ensure that the baseline investments catalyze impact at scale on agricultural practices and ecosystem services in SSA through cross-cutting capacity building and knowledge services, including platforms for co-learning and knowledge exchange.

c) Proposed alternative scenario:

The IAP-Food Security is designed to contribute to the GEF 2020 vision and long-term strategy (GEF/C.45/03) of achieving impact on the global environment by strategically investing in solutions that address the underlying drivers of global environmental degradation. Rapid population growth is a major trend in SSA, and there is a need to reconcile this trend with sustainable intensification of agriculture to meet demands for food while conserving the environment. In order to deliver global environmental benefits at scale, critical points in the causal chain of environmental degradation where GEF support can achieve maximum impact have been identified: i) transforming policy and institutional frameworks at the agriculture-environment nexus; ii) convening of multi-stakeholder alliances that bring together stakeholders from the public and private sectors, donors, the scientific community, and civil society; iii) demonstrating innovative approaches in integrated natural resources management and promote their upscaling; and iv) strengthening institutional capacity in monitoring and assessment of global environmental benefits, food security and resilience in order to improve investment decision-making processes.

The starting point for the IAP is a "target geography", which is defined at the regional scale based upon agro-ecological factors. The national level is essential at several points: participating countries have requested GEF support and committed to creating the enabling environment for interventions, including in the context of national frameworks such as for implementation of the CAADP program; finally, the local level determines specific needs and priorities on the ground, among the communities who would be expected to implement and sustain pilot interventions as target beneficiaries. Potential global environmental benefits are determined by site-specific conditions, though for GEF financing, country eligibility criteria also apply. This means that for the pilot program, interaction of factors at all three levels needs to be taken into account in designing and appraising potential interventions, as outlined in the conceptual framework presented in Figure 2.

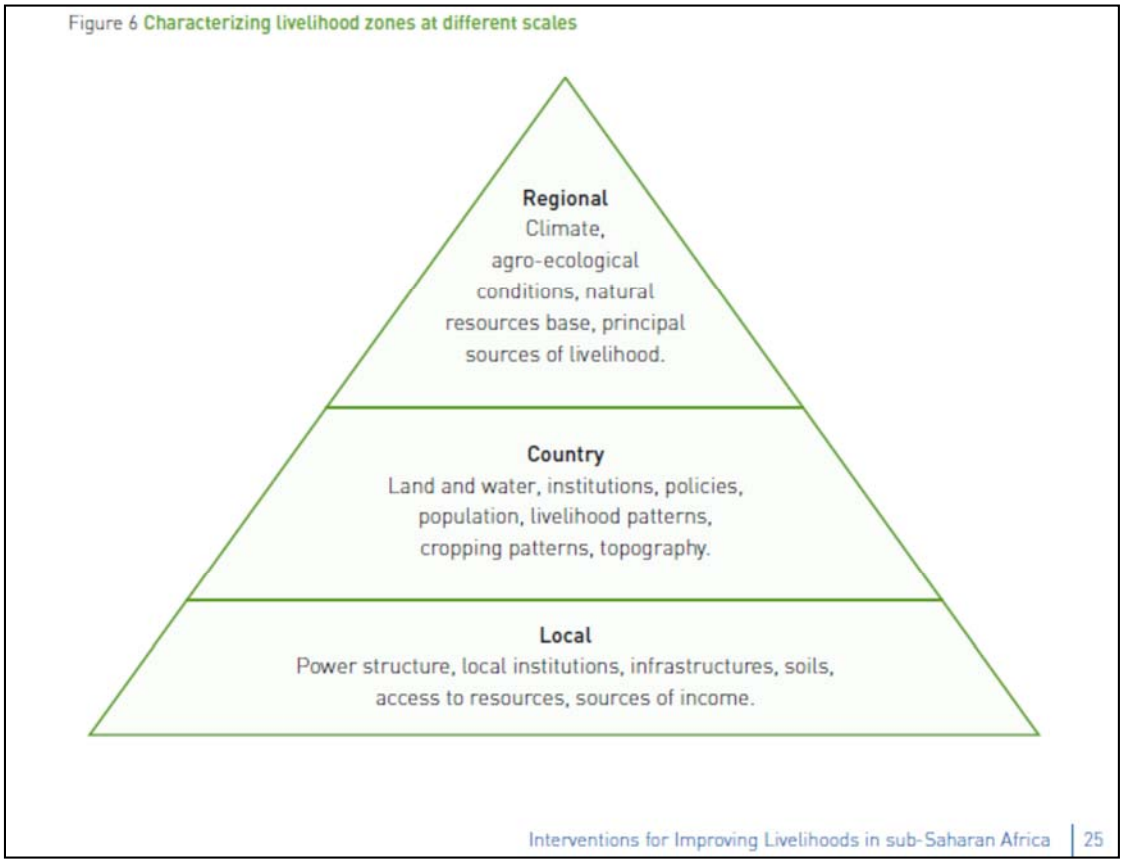

Figure2. Example of a conceptual framework for multi-scale planning[9], which illustrates how local level actions can be linked to national and regional priorities for integrating environment and development.

The goal of the IAP-Food Security is to increase the sustainability and resilience of food production systems and to enhance food security in Sub-Saharan Africa. The objective is to support countries in target geographies to integrate priorities to safeguard and maintain ecosystem services into investments in improving smallholder agriculture and food value chains. With an ecosystem services approach, focusing on creating synergies between provisioning services, such as food and fiber production, with regulating and supporting services, such as carbon sequestration, pollination and regulation of water and genetic diversity, sustainable management and resilience of ecosystems could make a sustainable contribution to enhancing food security. An ecosystem service approach would also safeguard the long-term productive potential of critical food systems and generate global environmental benefits related to reduction of emissions and carbon sequestration from improved land management, and conservation and sustainable use of agricultural biodiversity.

Building on the existing baseline, the barriers to bringing about transformational change and an alternative scenario to agricultural development and increased food production in SSA will be addressed using a three-pronged approach that: (i) ***engages*** all stakeholders through strengthening of institutional frameworks for sustainability and resilience; (ii) ***acts*** to scale up, diversify and adapt practices that will achieve large-scale transformation of agro-ecosystems in SSA; and (iii) ***tracks*** impacts on ecosystem services and resilience to assess progress and enable more informed decision-making on agriculture and food security at multiple scales. The Program will be delivered through 12 country child projects that address country specific priorities under the three Program components, and one cross-cutting regional coordination child project that will ensure programmatic coherence, co-learning and knowledge sharing, and impact at scale within and across target geographies:

[9] Source: Faurès J.-M. & Santini G. (Eds) 2008. Water and the Rural Poor: Interventions for improving livelihoods in Sub-Saharan Africa. FAO and IFAD, 2008.

1. *Engage* – Institutional framework for influencing sustainability and resilience

This component will establish and harness institutional frameworks to promote management of natural capital and ecosystem services in agriculture and food value chains at national, sub-regional and regional level. This requires cooperation among all stakeholders to build and strengthen institutions, social norms and regulations, and to develop systems of sharing responsibilities and benefits. This will be achieved through support to multi-stakeholder platforms that bring together different sectors and stakeholders in the environment, agriculture food security space to promote policy integration and enhanced sharing of experiences and knowledge, which is expected to lead to more supportive policies and incentives for smallholder agriculture. The following program-level outcomes and outputs are envisaged:

1.1 Multi-stakeholder and multi-scale frameworks in support of policy and institutional reform to facilitate the upscaling of integrated natural resources management. This involves the strengthening and/or establishment of functioning multi-stakeholder platforms at national and regional levels to mobilize and engage all relevant institutions in the environment and agriculture sectors. With GEF financing each country will establish frameworks that are consistent with priorities and opportunities for achieving cross-sector integration of environmental priorities, with agricultural and food security policies. The focus of these frameworks is to facilitate constructive dialogue on supportive policies, practices and investment opportunities that will underpin a shift toward sustainability and resilience for food security. At the regional level, platforms will be created for capacity building and knowledge services to support application of agreed decision support tools and participatory processes. This will also facilitate a stronger link between regional and sub-regional processes and those in the countries. GEF financing is expected to facilitate and promote the following (for details of activities to be financed by GEF for each Component see the summary introduction of **Annex C**):

- **Creation and/or strengthening of multi-stakeholder frameworks:** At national level, functioning multi-stakeholder and outreach frameworks will be established to facilitate dialogue between different actors, including the private sector, for effective cross-sectoral and ecologically sound value-chain approaches, advisory services and extension. Sustainable Land Management (SLM) priorities and integrated approaches to natural resources management will be aligned with food security frameworks to ensure long-term sustainability and resilience for agro-ecosystems and food systems. At the regional level three multi-stakeholder platforms will be established with GEF support that will deliver cross-cutting capacity building support and knowledge services to the participating countries in the following areas:
    - Institutional frameworks - support to development of frameworks that integrate ecosystem services considerations with food security, value-chains, sustainability and resilience, equity and gender aspects
    - Up-scaling and adaptation of integrated approaches – knowledge synthesis and experience-based learning, capacity building, and targeted research
    - Monitoring and Assessment of global environmental benefits, sustainability and resilience
- **South-South exchanges at multiple levels (i.e. local level within countries, and regional level between countries)** to foster greater understanding and discourse on the role of ecosystem services and landscape approaches across the targeted geographies in agricultural production and the ability of production systems to generate multiple goods and services.
- **New/improved gender and age sensitive decision-support tools** for INRM that take into consideration: (i) economic empowerment of women and youth, including access to knowledge as well as credit; (ii) decision-making power and representation of women and membership in non-economic and economic groups; and (iii) equitable workload balance.

1.2 Supportive policies and incentives in place to support smallholder agriculture and diverse and inclusive food value-chains. With cross-sectoral institutional frameworks fully functional at the national and regional levels, the potential for transforming production systems and value chains will be greatly enhanced. Through the GEF incremental financing, value chain approaches will be integrated and harmonized with sustainable production systems approaches that are climate smart, resource efficient, diversified, and resilient. This will be coupled with strengthening of value chains for selected crops, livestock and nature-based products, establishment of supportive policy frameworks and incentives at

national level, and increased involvement of Civil Society Organizations (CSOs), the private sector and farmer cooperatives in value-chain approaches to sustainable intensification of agriculture. In order to deliver this outcome, GEF will fund:

- Mainstreaming of sustainability and resilience into integrated, cross-sectoral policy frameworks, investment programs and value chains. This will draw on tools and approaches already developed by e.g. TerrAfrica for mainstreaming and integration of SLM into multi-sectoral investment programs, and using existing tools, such as the Country Support Tool to ensure that funding is allocated and earmarked for integrated approaches in sectoral budgets for agriculture and food security.
- Strengthened involvement of CSOs, farmer cooperatives and private sector in pro-poor and pro-environment value chains to help smallholder farmers to scale up good practices in INRM

2. *Act* – Scaling up integrated approaches for sustainability and resilience

Scaling up can be defined as expanding, adapting, and sustaining successful projects, programs or policies over time for greater development impact[10]. Scaling up also encompasses taking interventions with multiplier effects to a larger scale, such as policy and institutional reform. These can be combined by, for example, strengthening producers associations as an inclusive and sustainable pathway for upscaling. The IAP will promote opportunities for scaling-up management of natural capital and ecosystem services in agriculture and food value-chains in SSA. This will increase land area under integrated management, and catalyze investments in integrated natural resources management from multiple sources of funding. Multiple pathways for up-scaling will be pursued, including a) scaling up by adaptation of an innovation; b) scaling up by diffusion of an innovation; c) scaling up by replication; d) scaling up by value addition; and e) temporal scaling up.

Scaling up of sustainability and resilience using value chains, can be exemplified by an approach developed by IFAD[11] on integration of climate change risks in value chains, which suggests five stages in the design process. To address the broader goal of the IAP to enhance sustainability and resilience for food security, the steps could encompass the following: (i) selection of crop value chain: (ii) identification of key climate risks and other risks to natural capital and delivery of ecosystem services in the value chain; (iii) choice of the most effective interventions to enhance resilience to climate change and other external stressors and shocks; and (iv) reaching scale with the INRM intervention following the pathways a) to e) outlined above. The scaling process will deliver two outcomes:

2.1 Increased land area and agro-ecosystems under integrated natural resources management and SLM, including sustainable soil and water management, diversified production systems, and integrated crop-livestock systems. GEF incremental support will focus on priority areas of interventions that are critical for sustainability and resilience of production systems in the drylands. Each of these priorities encompasses a wide range of practices that have been tested and documented across production systems in the target geographies (e.g. FAO, WOCAT and TerrAfrica[12]):

- **Soil health and water management** where GEF will support scaling up of integrated soil fertility management, use of nitrogen fixing trees on farm to improve soil fertility and reduce erosion, conservation agriculture, water harvesting and integrated watershed/catchment management to sustain land resources and increase the availability of water for on-farm, domestic and other uses.
- **Diversification of production systems** where GEF financing will focus on *in situ* conservation of traditional varieties and species, local practices for sustainable management and use of genetic resources in the production systems, integration and sustainable management of high value perennial species in production landscapes, including trees on-farm, for the generation of multiple ecosystem

[10] Hartmann, A. & Linn, J.F. 2008. Scaling up: a framework and lessons for development effectiveness from literature and practice. Wolfensohn Center for Development, Working Paper 5. The Brookings Institution, 2008.
[11] How to assess climate change risks in value chain projects. IFAD, 2014.
[12] Liniger HP. Mekdaschi Studer R. Hauert C. & Gurtner M. 2011. SLM in Practice – Guidelines and Best Practices for Subsaharan Africa. TerrAfrica, WOCAT and FAO.

goods and services, including efficient use of biomass for cooking and introduction of renewable energy alternatives, and sustainable use of wild forest foods and other products as safety nets.

- **Integrated natural resources management in agro-pastoral systems** where GEF financing will support options that reduce soil and water degradation and greenhouse gas emissions through improved grazing and fodder management, and improved policies for effective integrated crop-livestock systems.

2.2 Increase in investment flows to integrated natural resources management from national governments, development partners, the private sector, and innovative funding mechanisms and approaches. This involves establishment of the pathways for scaling up discussed above, including measures such as access to finance and markets, which will be supported by co-financing, especially from financial institutions participating in the Program, such as IFAD and the World Bank that will establish mechanisms for access to credits and markets by smallholders in their baseline projects. GEF financing will be catalytic through investment in improvement of value chains in collaboration with partners such as AGRA and UNDP/AFIM, with targeted support to incentive mechanisms for smallholder farmers, and public-private sector partnerships. Thus, ccumulatively these measures can effectively impact on local economies and be transformative; towards integrated natural resources and ecosystems management supported by national governments, development partners, the private sector, and innovative financial mechanisms and approaches. Outputs include:

- Harnessing of public funding to INRM across relevant sectors catalyzed by the mainstreaming of environmental priorities into food security policies and frameworks under Component 1
- Enhanced targeting of donor funding to integrated approaches
- Channelling of private sector resources to pro-poor and pro-environment value chains, which will receive technical support from the ongoing baseline activities on inclusive value chains of, amongst others, UNDP's AFIM program and AGRA
- Establishment of innovative funding mechanisms (e.g. PES, PPPs) in e.g. Kenya and Ghana

Mechanisms for monitoring of these investment flows and funding earmarked for scaling up of integrated approaches will be established under Component 3 at local, national and regional levels. It will also be important to ensure that the integrated, cross-sectoral policy frameworks developed under Component 1 are linked to relevant investment plans and expenditure frameworks for agriculture and food security.

3. *Track* - Monitoring and assessment of ecosystem services, global environmental benefits and resilience

To determine whether integrated approaches to improving food security and natural resource management have a positive impact on resilience of ecosystem services, livelihoods and food security, they need to be monitored, assessed and evaluated to understand trade-offs and synergies among environmental, agricultural and livelihood outcomes, including for food security, using standardized tools that can be applied across scales, from the sub-national, to national and landscape scales, to the regional. This component has therefore been designed to establishing integrated baselines. GEF support will focus on capacity building of key institutions in charge of monitoring, support to development of tools and systems for monitoring global environmental benefits, such as carbon benefits and GHG emission reductions, as well as for monitoring of resilience, agricultural productivity and socio-economic benefits and gender mainstreaming in order to influence decision making towards sustainable food security pathways building on existing platforms, such as *Vital Signs*:

3.1 Capacity and institutions in place to monitor ecosystem services and resilience to enable more informed decision-making on agriculture and food security at multiple scales. This outcome will be achieved through an initial assessment of existing country needs, assessment of country baselines, and available M&A tools, with the objective of linking livelihood, food security and environmental indicators for global environmental benefits. GEF will support capacity building of key institutions in charge of monitoring, and provide support to the adaptive development of such tools and systems to suit specific socio-economic and agro-ecological contexts. The outputs include:

- **Framework in place for multi-scale monitoring and assessment of ecosystem services and global environmental benefits,** including gender dis-aggregated delivery of socio-economic benefits for for all participating countries.

- Multi-scale monitoring of ecosystem services, global environmental benefits, gender dis-aggregated delivery of socio-economic benefits, and investment flows to integrated approaches established at the regional, national and sub-national levels
- Capacity, tools and systems in place for multi-scale monitoring of ecosystem services, global environmental benefits and gender dis-aggregated delivery of socio-economic benefits
- Capacity in place for results sharing and communication with policy and decision makers
- Establishment of protocols on access and benefit sharing at national and community level

- **Institutional and technical capacity built** for multi-scale monitoring and assessment of ecosystem services and global environmental benefits at the regional, national and sub-national levels in all target geographies.
- **Integrated, open access data and information systems** across sectors in participating countries in place for enhancement of information accessibility, integration between national and local levels, knowledge management to inform investment in sustainable agriculture, and outreach in formats that are useful to and actionable by stakeholders.

3.2 Framework in place for multi-scale assessment, monitoring and integration of resilience in production landscapes. When designing interventions to address land degradation, loss of natural capital and impacts on food security and livelihoods, it is critical to understand resilience of agro-ecosystems. This outcome is therefore focusing on operationalizing the resilience concept, building on (but not restricted to) the STAP study on Resilience-Adaptation-Transformation-Assessment (RATA)[13]. GEF will support establishment of resilience assessment frameworks for each target geography, followed by identification, integration and mainstreaming of resilience indicators, including indicators for gender equality and socio-economic benefits, into all child projects at country level. Key outputs include:

- **Framework in place for monitoring of resilience** for each target geography with identification of key controlling variables and thresholds for promoting resilience, adaptation or transformation of agro-ecosystems.
- **Institutional and technical capacity in place to incorporate appropriate tools and practices for monitoring resilience at multiple scales** (e.g. STAP/RATA resilience framework) at regional, national and sub-national levels
  - Resilience framework incorporated into project design in all target geographies
  - Institutional and technical capacity, protocols, tools and systems in place for monitoring and assessment of resilience of socio-agroecosystem resilience in all country projects

Program Results Chain

The Program's results chain and impact pathway is conceptualized in Figure 3, integrating the outcomes identified above into the Program's theory of change. It builds on the key assumption that key stakeholder groups recognize the potential and importance of integrated approaches for improving agricultural practices and food value chains in SSA, and that the longer term impact on sustainability and resilience for food security will only be delivered if governments, the private sector and smallholders recognize the importance of INRM for delivery of ecosystem goods and services for food security and national development, and continue to support the processes with national means and inclusive food value chains beyond the implementation of the GEF IAP.

[13] O'Connell, D., Walker, B., Abel, N., Grigg, N. (2015) The Resilience, Adaptation and Transformation Assessment Framework: From Theory to Application. CSIRO, Australia. Available at: http://www.stapgef.org/stap/wp-content/uploads/2015/03/CSIRO-STAP-Resilience-Adaptation-Transformation-Assessment-Framework-Report.pdf

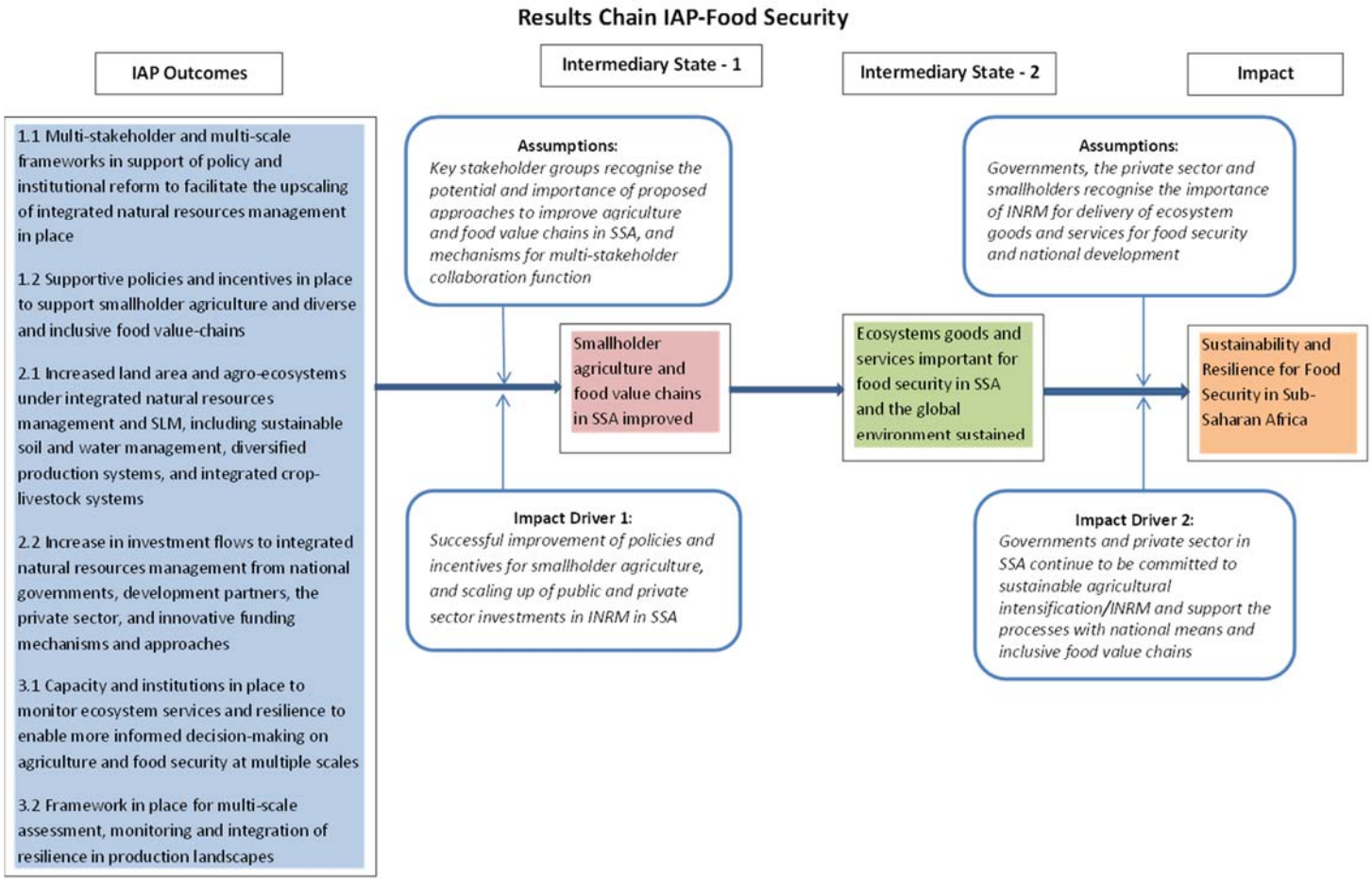

Figure 3. Program results chain and impact pathway.

d) Global environmental benefits and socio-economic co-benefits:

A set of key indicators for Global Environmental Benefits (GEBs) to be monitored at Program level have been selected together with key socio-economic indicators. In accordance with Table E, Part I on the Program's contribution to GEBs, land under integrated management will be measured and contribute to GEF's corporate results 1 and 2, and Greenhouse Gas (GHG) emissions avoided in production landscapes will contribute to corporate result 4 (Table E). In addition, an indicator on conservation of genetic diversity in production landscapes will be monitored by the Program, as well as an indicator of land cover that is a UNCCD indicator for its *Strategic Objective 2 to improve the conditions of affected ecosystems*. Naturalized Difference Vegetation Index (NDVI) is a measure of photosynthetic capacity that can be used for monitoring trends in land cover and productivity of the land[14]. Socio-economic benefits to be monitored at Program level include number of beneficiary households and their dietary diversity. Key program level GEB indicators can thus be summarized as follows (the final numerical targets will be determined through the detailed design processes of the child projects, as the Program level results are aggregates of these):

Global Environmental Benefits

[14] For a more in-depth discussion of the use of NDVI as a proxy for land cover see: Yengoh G.T. Dent D. Olsson L. Tengberg A.E. Tucker C.J. 2014. The use of the Normalized Difference Vegetation Index (NDVI) to assess land degradation at multiple scales: a review of the current status, future trends, and practical considerations. Lund University Center for Sustainability Studies (LUCSUS), and The Scientific and Technical Advisory Panel of the Global Environment Facility (STAP/GEF)

Indicator	Target
Land under integrated management (ha)	10,000,000 ha
GHG emissions avoided or reduced (tons CO_2e)	10-20 million tons
Genetic diversity of crops and animals maintained or increased in the production landscape (%)	15-25%
Land cover (increase, %)	10-20%

e) Incremental cost reasoning and co-financing:

To foster sustainability and resilience for food security in Africa, GEF is supporting a programmatic approach that provides incremental funding to removing three key barriers to sustainable intensification of agriculture in SSA. The Program combines a bottom-up approach at country level to removal of barriers to: policy and institutional reforms; to scaling up of integrated approaches; and to monitoring and assessment for effective knowledge management, with regional support to capacity building, knowledge services and co-learning to contribute to sustainable intensification of agriculture in SSA and to deliver impact at scale with GEF resources.

Component 1: Institutional frameworks. This component is essential for achieving transformational change of African agriculture at scale, as policy, institutional and governance reforms are a prerequisite for cross-sector engagement and up-scaling of integrated natural resources management and integration of ecosystem services considerations in investments. Under its objective LD-4: *Maximize transformational impact through mainstreaming of SLM for agro-ecosystem services*, Program 5: *Mainstreaming SLM in Development*, GEF will support the strengthening of multi-stakeholder platforms to foster broad participation and investments in SLM from governments, development partners and the private sector, which includes support to development of decision-support tools and participatory processes.

In addition, GEF support from BD-4: *Mainstream biodiversity conservation and sustainable use into production landscapes and seascapes and production sectors*, Program 9: *Managing the Human-Biodiversity Interface* will ensure that biodiversity is mainstreamed in agriculture and natural resources management policies. GEF funding from LD-4 and BD-4 will also be used to ensure that supportive policies and incentives are in place for integrated management in smallholder agriculture, and that Community-Based Organizations (CBOs) as well as the private sector support farmers to scale up best-bet practices, and to access markets for ecosystem services and food value-chains across target geographies.

Component 2: Scaling up of integrated approaches. This component builds on planned and existing baseline initiatives in sustainable management of ecosystems and natural resources described above. GEF will support scaling up of integrated approaches that generate multiple environmental benefits from agro-ecosystems and rangelands through improved land and soil health and improved vegetation cover. This approach is fully in line with the objective of LD-1: *Maintain and improve flow of agro-ecosystem services to sustain food production and livelihoods* and its programs on 1: *Agro-ecological Intensification*, and 2: *SLM for Climate-Smart Agriculture*. Incremental GEF funding will support conservation agriculture, agroforestry, improved rangeland management, and integrated approaches to soil fertility and water management. It will also be used to enhance agro-ecosystem resilience and management of risks through, for example, diversification of crops and livestock and integration of tree-based practices.

Under LD-3: *Reduce pressures on natural resources by managing competing land uses in broader landscapes* and its Program 4: *Scaling up sustainable land management through the landscape approach*, GEF support will be used to scale up policies, practices and incentives for improving production landscapes in the target geographies that generate environmental benefits. It will encourage wider application of innovative tools and practices for natural resources management at scale, including innovations for improving soil health, water resources management, and vegetation cover. It will help access innovative markets and financing mechanisms, and also support integrated watershed management, especially in mountain regions, to improve hydrological functions and services for agro-ecosystem productivity.

It is also consistent with BD-3: *Sustainably use biodiversity* and its Program 7 on *Securing Agriculture's Future: Sustainable Use of Plant and Animal Genetic Resources*. Child projects will implement activities related to *in-situ* conservation and local seed banks, through farmer management, of plant genetic resources in Vavilov centers of diversity, maintain and strengthen different production systems that allow continued evolution and adaptation, to ensure food security and ecosystem resilience. Biodiversity funding will target *in-situ* conservation, through farmer management, of plant genetic resources. It will also be used to maintain and strengthen different production systems that allow continued evolution and adaptation and embed agricultural biodiversity, including from crop wild relatives, in sustainable intensification and adaptation to climate change. Under BD-4 and its Program 9: *Managing the Human-Biodiversity Interface*, land-use planning, improvement and change of production practices, and piloting of financial mechanisms (certification, PES, etc.) will be supported with the focus on investments at scale.

Linked to its objective CCM-2: *Demonstrate systemic impacts of mitigation options*, Program 4*: Promote conservation and enhancement of carbon stocks in forest, and other land use, and support climate smart agriculture*, GEF will support scaling up of INRM practices that reduce land-use emissions and emissions from agricultural practices, and promote carbon sequestration, to protect and enhance carbon pools in the predominant agro-ecosystems in the target geographies. Climate smart agricultural practices that will receive support for up-scaling include: conservation agriculture, such as reduced tillage, use of cover crops and green manure; agroforestry; and improved livestock and grazing management.

Component 3: Monitoring and assessment. GEF support to this component under LD-4, Program 5, CCM-2, Program 4 and BD-3 Program 7 will ensure that baselines for ecosystem services, such as carbon stocks in soils and vegetation and agro-biodiversity, are established, quantified, valued and monitored. CCM-2 funding will also support development of tools to improve the accuracy of GHG emissions estimates from agriculture. This information is expected to feed back into Component 1 to ensure that valuation of ecosystem services and assessment of resilience is linked with development policy and finance planning in the agricultural and natural resources management sectors. Valuation of ecosystem services should also inform policy instruments and fiscal reforms designed to provide positive incentives for conservation of ecosystem services, with a focus on carbon stocks and agro-biodiversity, and for enhancing resilience.

The total co-financing to the Program across components from the participating countries and development partners is estimated to be approximately $800 million .

g) Innovation, sustainability and potential for scaling up:

The overall IAP approach to INRM is innovative, as it combines strengthening of policy and institutional frameworks with new mechanisms for scaling up on-the-ground that involves working with all stakeholders along the value chain to strengthen market access for smallholders. The Program will support greening of selected value chains and ensure that they are inclusive and benefit the poor, and women and men equally. The monitoring and assessment component of the Program will provide information to support policy and decision making processes for further up-scaling.

Best practices for INRM that generate multiple global environmental and socio-economic benefits will be taken to scale, linking sustainable management of ecosystems at the landscape level with improved food security and poverty reduction at community level. This is expected to generate triple win situations that combine agricultural productivity increase, with enhancement of ecosystem services, such as regulation of genetic diversity, water and sediment flows and carbon sequestration, and improvements of livelihoods, incomes and food security. The triple win model will be assessed and refined based on socio-economic and environmental sustainability criteria and documented for wider dissemination and scaling up through the knowledge management system of the Program.

Another innovative element is the systematic integration of resilience assessment into Program activities. Lessons and experiences of identifying pathways for agro-ecosystem resilience, adaptation or transformation to design well targeted interventions will be widely disseminated and shared through Program networks and knowledge partners. Regional multi-stakeholder platforms in SSA that will receive support from the Program will also provide vehicles for up-scaling and replication and to reach new countries that are not yet participating in the IAP.

2. *Stakeholders.* Will program 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 program design/preparation:

The Program includes a large array of stakeholders at regional, national and local levels. Some of the national and local stakeholders will be identified in the preparation phase of the national child projects. Two major stakeholder consultations were organized to prepare the Program. An Expert Consultation Workshop was held in Nairobi on 21-22 October 2014 to discuss and agree on the strategic directions of the Program and involved representatives from African countries in the target geographies, regional and sub-regional organizations, scientific institutions and NGOs. Countries were encouraged to submit expressions of interest to participate in the Program that were subsequently reviewed by the GEF Secretariat. This was followed by a Program Development Workshop in Nairobi on 24-26 February 2015 where a draft of the Program Framework Document was reviewed by the countries selected for the IAP, GEF agencies and key regional bodies and knowledge partners. The workshop led to further refinement of the Program components and broad agreement on the regional coordination and knowledge management arrangements for the Program. Based on these consultations, key stakeholders identified at Program level include:

- National governments - represented by Ministries of Environment, Agriculture, Forestry or equivalent in the 12 participating countries in SSA. The will be in charge of national implementation, and upscaling of IAP activities
- AU/NEPAD – represented by the NEPAD Planning and Coordination Agency (AU/NPCA) – will ensure coordination and mainstreaming with NEPAD and CAADP linked activities
- Regional Economic Communities (RECs) – IGAD, SADC, ECOWAS
- Multilateral agencies – IFAD, FAO, UNDP, UNEP, UNIDO, World Bank will oversee national and regional level implementation of child projects
- Multilateral Environmental Agreements and Treatise, such as UNCCD, CBD, UNFCCC and ITPGRFA have a role to play in feeding lessons from the IAP into relevant international policy-making processes
- Research institutes and centers –NARS, CGIAR centers and Africa regional centers, such as ASARECA, CORAF, CILSS and AGRHYMET are important knowledge partners to the Program
- International NGOs – AGRA and CI are important knowledge partners to the Program
- CSOs – will involve different civil society organizations starting from local communities and farmers cooperatives, women's associations, farmer-led extension networks, etc. They will be key stakeholders and in charge of the on-the-ground implementation of INRM practices
- Local governments – will play a key role in child project implementation
- Private sector – will be key partners in the strengthening of food value chains in SSA

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

The IAP on Food Security is consistent with the GEF Policy on Gender Mainstreaming (PL/SD/02. May 1, 2012) and is fully aligned with the gender policies/strategies of the participating GEF agencies, in particular with that of IFAD, the lead agency for the IAP. IFAD's Gender Equality and Women's Empowerment Policy of 2012 builds on the premise that agricultural growth is enhanced if both women and men are enabled to participate fully as economic actors. Its goal is to enable poor rural women and men to improve their food security and nutrition, raise their incomes and strengthen their resilience. The IAP will mainstream the following gender concerns into its child projects; indicators will be selected depending on the nature of the project:

Promote economic empowerment of rural women and men

- Proportion of women accessing agricultural advisory, savings and borrowing services
- Proportion of women who are members of groups related to economic activities (crop/livestock production, savings and credit, and marketing)
- Rural women's incomes/expenditures as compared to men's

Increase rural women's decision-making power and representation

- Proportion of women in the membership of non-economic groups (natural resources management, community and social infrastructure)
- Proportion of women in leadership positions in economic groups in IAP-supported projects
- Proportion of women leaders in apex organizations associated with the IAP

Achieve an equitable workload balance

- Score on workload reduction and balance

Monitoring of progress in mainstreaming gender will be done at both project and program level and the knowledge management component of the IAP will ensure capacity building and consistency in data collection across projects.

4. Benefits. Describe the socioeconomic benefits to be delivered by the program at the national and local levels. Do any of these benefits support the achievement of global environmental benefits (for GEF Trust Fund), and/or adaptation to climate change?

The countries that are participating in the IAP are among the poorest in the world with around 70% of their populations depending on agriculture for their livelihoods. The IAP will promote integrated natural resources management activities that safeguard ecosystem services important for the long-term productivity of agro-ecosystems resulting in higher yields from more diverse farming systems that contribute to long-term food security and nutrition. Smallholders will also benefit from more inclusive value-chains and value addition of key crops and commodities that will result in higher incomes and new employment opportunities in rural areas for both women and men as well as young people.

Moreover, the IAP is expected to accelerate the widespread application of sustainable and climate resilient practices that will stabilize yields in the face of climate change. Socio-economic benefits that will be monitored at program level include : (i) beneficiary households (number); and (ii) dietary diversity (index). *Dietary diversity* is an important component of food security and nutrition that is closely linked with the Program's focus on promoting diversification of agriculture and conservation of genetic diversity on farm. A dietary diversity score can be calculated using Demographic Health Surveys by adding up the number of food groups represented in the child's diet and is based on research by the CGIAR group[15] and efforts by FAO[16] to standardize dietary diversity scores. There is also a close correlation between land cover and dietary diversity.

5. Risks. Indicate risks, including climate change risks, potential social and environmental future risks that might prevent the program objectives from being achieved, and if possible, propose measures that address these risks to be further developed during the program design:

The key risks at the Program level range from risks such as climate change and political instability, to risks at local level related to willingness of communities to participate:

Critical Risks	Risk Level	Mitigation Measures
Climate change may reduce the benefits of up-scaling of integrated natural resources and ecosystem management	Medium	Through the support to multi-stakeholder platforms under Component 1 that bring together development partners, the scientific and technical community, the private sector, NGOs and community-based organizations, the IAP will be able to

[15] Ickowitz A. Powell B. Salim M.A. & Sunderland T.C.H. 2014. Dietary quality and tree cover in Africa. *Global Environmental Change* 24: 287-294.

[16] Kennedy G. Ballard T. & Dop M.C. 2011. Guidelines for Measuring Household and Individual Dietary Diversity. FAO, Rome, Italy.

		draw on the latest knowledge on how to enhance the resilience of agro-ecosystems in the face of climate change. Integrating climate change considerations into the up-scaling of integrated approaches thereby becomes an integral part of the program strategy.
Political instability may slow down implementation of activities at country level	Medium/Low	The participating countries all meet the criteria of having a stable baseline of support to the agricultural and environmental sectors. They have also demonstrated willingness to improve the enabling environment for sustainable land management in line with longer-term CAADP goals. This minimizes the risk of sudden shifts in political priorities and support at national level.
Lack of interest from the private sector to participate	Medium	Under Component 1, the IAP will support the development of incentives for private sector involvement in scaling up of integrated approaches and inclusive value-chains for smallholder agriculture.
Capacity constraints at national and local levels may slow down the scaling up of integrated approaches	Medium	The regional project will provided targeted training and capacity building support under each program component to overcome barriers to scaling up related to capacity constraints
Weak community participation	Low	The program has been designed to provide immediate economic benefits to smallholders by better linking them to markets through support to inclusive value chains and value addition activities. The use of participatory approaches in the detailed design of local-level activities will also ensure that interventions reflect the priorities of local communities.
Limited inclusion of women	Low	The IAP is integrating gender considerations in all its activities. It will integrate gender indicators in its multiscale system for monitoring of ecosystem services under Component 3, on (i) economic empowerment of women, (ii) rural women's decision-making power, and (iii) rural women's workload balance.

Each child project will undertake its own risk analysis when fully developed and will be required to address the risk categories identified above.

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

Overall coordination of the IAP-Food Security will be the responsibility of IFAD, in its capacity as the lead GEF agency for the program, and the GEF Secretariat (Figure 4). IFAD, throughout its African portfolio of projects promotes a ''multi-benefit'' approach, building food security and climate resilience through managing competing land-use systems at the landscape level while at the same time reducing poverty, enhancing biodiversity, increasing yields, and reducing greenhouse gas emissions. IFAD is thus well placed to leverage support from its investment portfolio on natural resources management in Africa to scale up investments in integrated approaches for sustainability and resilience for food security and to lead the IAP-Food Security. IFAD's cumulative baseline investments in INRM in Africa currently amount to well over two billion US dollars.

In coordinating the Program, IFAD and GEFSEC will be advised by:

(i) The IAP Consultative Committee that will be composed of all GEF agencies participating in the program,other IAP partner institutions, and representatives from all IAP pilot countries

(ii) The IAP Technical Committee that will be composed of selected experts from e.g. the Scientific and Technical Advisory Panel (STAP) of the GEF, the Committee on Science and Technology (CST) of the UNCCD, and other relevant experts on ecosystem services and food security from SSA regional bodies, such as CILSS/AGIR, IGAD/IDRISSI, etc.

To ensure efficiency and cost effectiveness and cross-fertilization between the different target geographies, the annual meetings of the IAP Consultative and Technical Committees will to the extent possible be held back-to-back with GEF Extended Constituency Workshop rotating between SSA sub-regions. Coordination arrangements at national level will be assured during development of each national child project. A national lead entity will ensure that all relevant sectors are consulted and included in the child project as appropriate. Each country will be represented by the national lead entity in the IAP Consultative Committee's annual meetings. Terms of Reference for the IAP Consultative Committee and Technical Committee are provided in Annex D,

Regional knowledge services will be provided under three platforms on:

(i) **Monitoring and Assessment** –will provide training and capacity building support to development of M&A frameworks, indicator selection, and application of monitoring tools
(ii) **Institutional Frameworks** – will provide support to integration and mainstreaming into policy and development frameworks of ecosystem services, food security, resilience, and gender considerations
(iii) **Upscaling of integrated approaches** – will provide technical assistance, training and capacity building in scaling up of on-the-ground investments of innovative INRM practices, including value-chain approaches, as well as through innovative mechanisms such as PES and PPP.

The implementation arrangements of the Program will build on the existing baseline of programs and structures at national and regional levels and be implemented via a portfolio of 12 national projects, as well as regional cross-cutting support to capacity building and knowledge management services. Strong country ownership of the regional knowledge services and platforms will be important for making the Program transformative. Therefore, each component will be assigned to a country, with a deputy (another country, based on language issues, geographic distribution or agency). The lead countries will report to the other countries during the annual Consultative Committee Meetings on respectively: M&A; strengthening of institutional frameworks; and upscaling of integrated approaches. The countries in question will also be expected to play an active role in identifying lessons learnt and to disseminate them through regional networks and knowledge partners. Overall coordination arrangements are outlined in Figure 4.

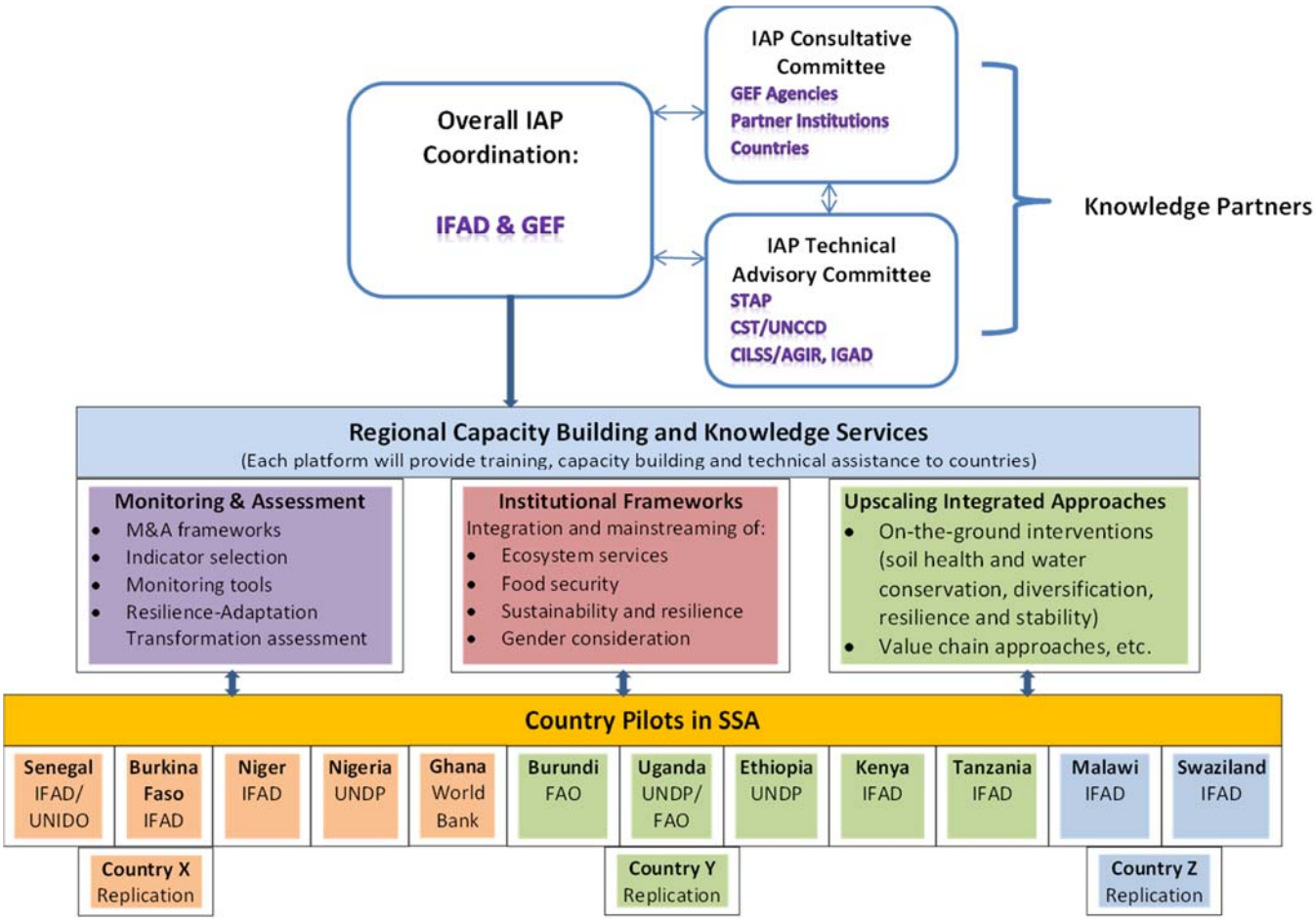

Figure 4. Program coordination arrangements.

Coordination of Monitoring and Evaluation (and Monitoring and Assessment) at the Program level

The program will institute a monitoring and evaluation (M&E) strategy at Program level to be implemented according to the GEF and GEF Agencies procedures and guidelines. The strategy will include Project-level activities that respond to GEF specific reporting requirements, but also coordinated activities at Program level, in particular to account for large-scale impact on Global Environmental Benefits. In order to ensure a solid baseline that will allow the Program to assess the environmental sustainability of the agro-ecosystems and general resilience of the livelihoods of the target population, all child projects will be supported to develop a solid environmental and socioeconomic baseline, ideally be geo-referenced. In addition all children country projects will be strengthened in monitoring and assessment of Global Environmental Benefits and resilience at multiple scales.

IFAD will be responsible for submitting on an annual basis and as part of the GEF-Annual Monitoring Review Process (AMR), the Project Implementation Reports (PIR) from the child projects plus a consolidated report on progress of the entire Program (PIR- Program). This consolidated PIR-Program will include key issues related to Program development, GEF-RBM requirements and it will show how each child project would contribute to the Program goal and objectives. Each implementing GEF Agency will be responsible for the submission of the child project PIRs to the Program Lead Agency (IFAD). Results frameworks of the child projects will be aligned with the Program goals and objectives and will contribute to the Global Environmental Benefits. At the mid-term of the Program, IFAD will provide an independent qualitative assessment to the question: How is the strategic combination of child projects progressing to produce results that would not be possible to achieve through a project-by-project approach? The budgeted monitoring and evaluation plan of the Program is summarized in **Table 1.**

Type of activity	M&E and/or M&A Activity	Responsible Parties	Time-frame	Budget	Budget source
(Environmental and Socioeconomic Baselines)	Capacity needs assessment for multi-scale monitoring and assessment of environmental sustainability of ecosystems and livelihoods.	IFAD	Q1 (Year 1)	USD 100,000	Cross Cutting Child Project
	Across all country Child Projects: Training in multi-scale monitoring and assessment of environmental sustainability of ecosystems and livelihoods.	IFAD with other relevant agencies	Q1 (Year 1)	USD 100,000	Cross Cutting Child Project
	Across all country Child Projects: Multi scale monitoring and assessment of environmental sustainability of ecosystems and livelihoods.	IFAD with other relevant agencies	Q2 (Year 1)	USD 600,000 (Approx. USD 50,000 per project)	Cross Cutting Child Project
	Technical analysis Program Baseline - Consolidated assessment (possibly geo-referenced).	IFAD	Q3 (Year 1)	USD100,000	Cross Cutting Child Project
Workshops Program Level	Inception Workshop: design and selection of M&E systems (procedures, tools and guidance manual).	IFAD with other relevant agencies	Q1 (Year 1)	USD 100,000	Cross Cutting Child Project
	Mid- Term Workshop (Program progress).	IFAD	Program Mid-Term	USD 100,000	Cross Cutting Child Project
	Final Workshop (Lessons Learnt).	IFAD	Within six months before or after program completion	USD 150,000	Cross Cutting Child Project

Reporting Activities Child Project Level	Periodic supervision and progress reporting to GEF SEC (PIR).	IFAD with other relevant agencies	Annual Basis	Covered by GEF agency fee	NA
	Mid-term Review (including tracking tools and co-financing reports).	IFAD with other relevant agencies	Mid - Term	Approx. USD 25,000 by project	Country Child Project(s)
	Terminal Report (including tracking tools and co-financing reports).	IFAD with other relevant agencies	Within six months before or after project completion	Approx. USD 25,000 by project	Country Child Project(s)
Reporting Activities Program Level	Capacity needs assessment for monitoring Global Environmental Benefits (GEB) and resilience at multiple scales.	IFAD	Periodically*	USD 100,000	Cross Cutting Child Project
	Across all country Child Projects: Training and exchange of experiences in monitoring and assessment GEB and resilience at multiple scales.	IFAD	Periodically*	USD 200,000	Cross Cutting Child Project
	Across all country Child Projects: Monitoring and assessment of GEB and agro-ecosystems resilience.	IFAD with other relevant agencies	Periodically*	USD 600,000 (Approx. USD 50,000 by project)	Cross Cutting Child Project
	Program -Periodic supervision and Program progress reporting to GEF SEC (Consolidated PIR- Program).	IFAD	Annual Basis	Covered by GEF agency fee	NA
	Quality assessment - review Project PIRs, MTR, TER and progress reporting to GEF SEC.	IFAD	Annual Basis	Covered by GEF agency fee	NA
	Mid Term Review IAP Food Security Program.	IFAD -Independent reviewer or entity	Program Mid-Term	USD 100,000	Cross Cutting Child Project
	Terminal Evaluation IAP Food Security Program.	IFAD- Independent reviewer or entity	Within six months before or after program completion	USD 100,000	Cross Cutting Child Project
			TOTAL	**USD 2,350,000**	

Linkages with strategic GEF global and regional projects

TerrAfrica Strategic Investment Programme (SIP) received GEF support in GEF-4 and is continuing through NEPAD. Countries have received support in several areas, including capacity building and knowledge management for SLM**, s**caling up sustainable land management practice, and the TerrAfrica platform and its Executive committee could be used as channels to extend Program result**s** and tools to other African countries facing the same challenges as the pilot countries under the IAP-Food Security. More specific collaboration could be envisaged in common countries.

The Great Green Wall for the Sahara and the Sahel Initiative (GGWSSI) is an initiative of the African Union, launched in 2007, aimed at tackling land degradation and desertification, drought and climate change, biodiversity loss and poverty in the Sahel-Saharan region. The Initiative has been supported through the GEF project entitled the Sahel and West Africa Programme in support to the Great Green Wall - SAWAP implemented by the World Bank in 12 countries and its regional umbrella BRICKs project in collaboration with partners (IUCN, OSS, CILSS). This GEF-WB project supports a mosaic of sustainable land uses and management practices in in targeted landscapes and in climate vulnerable areas and close collaboration will be established especially in the Sahel target geography to exchange experiences and lessons learned.

Decision Support for Mainstreaming and Scaling up of Sustainable Land Management Project (DS – SLM) project. This global GEF/FAO project will provide harmonized tools for land degradation assessment, land-use systems diagnostics and best SLM practices assessments to support programmatic processes for SLM upscaling. Several countries in Africa will receive technical assistance from the project and close linkages will be forged with the proposed Program on e.g. application of assessment tools and documentation of best practices to enhance knowledge management.

Sustainable Land Management and Climate Change Mitigation Co-benefits (GEF/UNEP/WB). The global project will build technical capacity of countries to apply the carbon benefit tool previously supported by GEF to ensure that carbon benefits from GEF projects are adequately monitored and reported. This will be one of the tools that Component 3 of the Program will use and close collaboration will thus be established with this project.

Participatory assessment of land degradation and sustainable land management in grassland and pastoral systems GEF/FAO). The global project will improve assessment capability and decision-making processes with respect to pastoral, agrosylvo-pastoral and grasslands system stakeholders to reveres land degradation and enhance food security and resilience to climate change. Tools developed by this project will also be taken up by Component 3 of the Program.

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

Effective knowledge management is a core leveraging mechanism of the Program to achieve up-scaling of integrated natural resources management approaches at multiple scales. Knowledge management will receive support under component 1 and its outcome on establishment of multi-stakeholder platforms to enhance linkages between science, policy and practice, and under component 3 on monitoring and assessment to ensure feedback of lessons to policy makers at national and regional level on what works and what does not. The Program will also learn from other ongoing GEF and non-GEF supported initiatives, such as the World Bank/GEF Sahel and West Africa Program in support of the Great Green Wall; the FAO/GEF Decision Support for Mainstreaming and Scaling up Sustainable Land Management project that builds on the LADA/WOCAT approach; other GEF programmatic approaches, such as the PRC-GEF Land Degradation Partnership. For example, WOCAT offers a suite of tools that can be used for assessment, documentation and dissemination of best practices in natural resources management that have already been used by TerrAfrica and the PRC-GEF Partnership, and these tools have recently been adopted by the UNCCD. In addition, the UNEP/ROA managed Africa Adaptation Knowledge Network (AAKNet) online portal, an information sharing portal on ecosystems based adaptation best practice, with audiences that range from policy to educational and research to practitioners across the continent can also contribute to sharing knowledge generated from this programme.

A knowledge management component will be integrated into all child projects. The regional cross-cutting project under the Program will adapt existing tools to the needs of the program and make them available in a user friendly format to all participating countries. The regional cross-cutting project will also provide training and capacity building in the application of the tools to ensure consistent quality, reporting and dissemination of new knowledge generated, lessons learnt and best practices.

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

The IAP is reinforcing the commitments of the participating countries to implement the UN Convention to Combat Desertification (UNCCD), the Convention on Biological Diversity (CBD), and the UN Framework Convention on Climate Change (UNFCCC) in an integrated manner that maximizes synergies and generates multiple global environmental benefits across conventions. The program will also ensure that food security benefits underpins the achievements of GEBs, by working in concert with the African Union's Environment Action Plan (EAP) and Comprehensive African Agricultural Development Program (CAADP), and its pillars on (i) extending the area under SLM and reliable water control systems; (ii) improving rural infrastructure and trade-related capacities for market access; (iii) increasing food supply, reducing hunger, and improving responses to the food emergency crises; and (iv) improving agriculture research, technology dissemination and adoption.

The IAP directly contributes to the implementation of the **UNCCD** 10-year strategic plan (10YSP) 2008-2018 and its strategic objectives on: (i) to improve the living conditions of affected populations; (ii) to improve the condition of affected ecosystems; (iii) to generate global benefits through effective implementation of the UNCCD; and (iv) to mobilize resources to support the implementation of the Convention through building effective partnerships between national and international actors. The program has also been designed to contribute to the operational objectives of the 10YSP, especially on (i) policy framework; (ii) science, technology and knowledge; and iii) financing and technology transfer. All participating countries have allocated STAR funding from the GEF Land Degradation focal area and all 12 national child projects are consistent with the National Action Programs to Combat Desertification (NAPs).

With regard to the **CBD**, the IAP will contribute to the Strategic Plan for Biodiversity 2011-2020 and the associated Aichi target 7 on sustainable agriculture, aquaculture and forestry. The IAP is designed to contribute to the CBD program on Agricultural Biodiversity and its cross-cutting initiative on Food and Nutrition, as well as the International Treaty on Plant Genetic Resources for Food and Agriculture. National child projects will be consistent with the National Biodiversity Strategies and Action Plans (NBSAPs), especially those with STAR funding from the Biodiversity Focal Area: Burundi, Ethiopia, Ghana, Kenya, Nigeria, Swaziland, Tanzania, and Uganda, which are countries with high biodiversity values that have prioritized conservation of their agro-biodiversity.

The IAP-Food Security also responds to **UNFCCC** priorities on issues related to agriculture, especially the identification and assessment of agricultural practices and technologies to enhance productivity in a sustainable manner, food security and resilience, considering the differences in agro-ecological zones and farming systems, such as different grassland and cropland practices and systems (FCCC/SBSTA/2014/2). National child projects will respond to priorities identified in National Communications (NCs), especially those with STAR funding from CCM-2, which include Burundi, Ghana, Kenya, Malawi, Nigeria, Senegal, Swaziland, Tanzania, and Uganda that have prioritized reduction of emissions from land use, land use change and forestry, and deforestation and forest degradation In addition, several country child projects also respond to priorities in the National Adaptation Program of Action (**NAPA**) to meet urgent and immediate needs to adapt to climate change, including Burkina Faso, Burundi, Malawi, and Senegal.

National development frameworks: Country projects are also fully line with national development strategies and priorities, such as national food security and nutrition policies in Burkina Faso, Ethiopia, Ghana, Malawi, Niger and Tanzania; poverty reduction strategies in Burundi; environmental governance policies in Kenya and Senegal; green growth and value chain policies in Ethiopia, Nigeria, and Uganda; and local sustainable development policies and strategies in Swaziland.

Regional: African Union (AU) and the Comprehensive Africa Agriculture Development Programme (CAADP)

The proposed IAP builds on the momentum created by the 2014 Year of Agriculture and Food Security in Africa that was launched by the African Union to mark the 10th anniversary of the adoption of the Comprehensive Africa Agriculture Development Program that has received GEF support through the TerrAfrica platform. The objective of the

Year of Agriculture was to consolidate active priorities toward new priorities, strategies and targets for achieving results and impacts to transform Africa's agriculture through harnessing opportunities for inclusive growth and sustainable development. The proposed IAP is fully consistent with the focus on increased agriculture production, productivity and value addition, functioning agricultural markets and increased investments along the agriculture value chain. Selected countries all have a CAADP strategy in place.

Global: MDGs and Sustainable Development Goals (SDGs)

The objectives of the IAP is also fully in line with the MDGs as well as the post-2015 development agenda, embodied in the Sustainable Development Goals (SDGs), expected to be adopted by the UN General Assembly in September 2015. Due to its integrated nature, the IAP will make a significant contribution towards achieving a number of SDGs in Africa, and in particular: SDG1: End poverty in all its forms everywhere; SDG2: End hunger, achieve food security and improved nutrition, and promote sustainable agriculture; SDG15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, halt and reverse land degradation and halt biodiversity loss – the IAP will contribute to a wide range of targets under this SDG pertaining to reduction of desertification and land degradation as well as biodiversity loss, and sustainable use and management of ecosystems. Finally, the IAP, through its approach of using multi-stakeholder platforms to strengthen policy and institutional frameworks and to scale up good practices in integrated management of ecosystems, will also contribute to SDG17: Strengthen the means of implementation and revitalize the global partnership for sustainable development.

9. *Child Selection Criteria*. Outline the criteria used or to be used for child project selection and the contribution of each child projects to program impact.

All child projects have been screened by the GEF Secretariat against a set of predetermined criteria based on GEF priorities and requirements that include:

National activities:

- Agro-ecological context and spatial coverage – defined landscape or landscapes within the targeted agro-ecological zones
- Baselines and co-financing – build on existing investments with potential to catalyze additional resources
- Institutional framework – evidence of engagement by relevant ministries and governments agencies, development partners, scientific institutions, civil society organizations, farmer organizations, and private sector institutions
- Gender considerations – take into account the differences in needs and practices of women farmers

Regional and cross-cutting activities:

- Catalytic impact – impact on scaling up processes related to policy mainstreaming and accessing of finance for INRM
- Monitoring and assessment - baseline to build on for regional M&A
- Knowledge management - tools and systems to support knowledge management at all levels

In addition, the lead agency of the IAP-Food Security, IFAD, will undertake a final screening of the child projects prior to inclusion in the Program to ensure consistency with agreed Program components, and outcomes and selected indicators for global environmental and socio-economic benefits monitoring.

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

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

NAME	POSITION	MINISTRY	DATE *(MM/dd/yyyy)*
Seydou Yayé	General Director of Planning	**MINISTRY OF LAND, NIGER**	**03/03/2015**
Georges Yameogo	Permanent Secretary	**MINISTRY OF ENVIRONMENT, BURKINA FASO**	**03/12/2015**
Fredua Agyeman	Director of Environment	**MINISTRY OF ENVIRONMENT, SCIENCE, TECHNOLOGY AND INNOVATION, GHANA**	**02/11/2015**
Richard Lesiyampe	Principal Secretary	**MINISTRY OF ENVIRONMENT, WATER AND NATURAL RESOURCES, KENYA**	**03/15/2015**
Yomi Ladapo	Director	**MINISTRY OF ENVIRONMENT, NIGERIA**	**03/19/2015**
Stephen Zuke	Executive Director	**MINISTRY OF TOURISM AND ENVIRONMENTAL AFFAIRS, SWAZILAND**	**03/13/2015**
Julius Ningu	Director-Environment	**VICE PRESIDENT'S OFFICE, TANZANIA**	**03/16/2015**
		MALAWI	**PENDING**
Antoinette Macumi	Acting Permanent Secretary	**MINISTRY OF ENVIRONMENT BURUNDI**	03/09/2015
Ghirmawit Haile	GEF operational focal point	MINISTRY OF ENVIRONMENT AND FOREST ETHIOPIA	03/20/2015
Mariline Diara	Director	**MINITRY OF ENVIRONMENT, SENEGAL**	03/12/2015
Patrick Ocailap	Deputy Secretary to the treasury	**MINISTRY OF FINANANCE, PLANNING AND**	03/12/2015

		ECONOMIC DEVELOPMENT UGANDA	

B. GEF AGENCY(IES) CERTIFICATION

This request has been prepared in accordance with GEF policies[17] and procedures and meets the GEF criteria for program identification and preparation.

Agency Coordinator, Agency name	**Signature**	**DATE** *(mm/dd/yyyy)*	**Project Contact Person**	**Telephone**	**Email Address**
Gernot Laganda IFAD		17 April 2015	Eric Patrick	+39 06 5459 2488	e.patrick@ifad.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 PFD.

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

LIST OF CHILD PROJECTS UNDER THE PROGRAM FRAMEWORK

		Child Projects under the Program[a/]					
Country	**Project Title**	**GEF Agency**	**Focal[1] Area 1 LD**	**Focal[1] Area 2 BD**	**GEF Amount ($) Focal[1] Area 3 CC**	**Regional[1] Incentive**	**TOTAL[2]**	**Agency ($)**
			Project	Project	Project	Project	Project	
	FSPs							
Burkina Faso	1. Fostering Participatory Natural Resource Management Project	IFAD	4	0	0	4	7.923	
Burundi	2. Support for sustainable food production and enhancement of Food security and Climate Resilience in Burundi's Highlands	FAO	1.28	1	2	4	8.062	
Ethiopia	3. Integrated Landscape Management to Enhance Food Security and Ecosystem Resilience	UNDP	5.27	2	0	4	11.1	
Ghana	4. Sustainable Landscape Management Project in Northern Ghana	World Bank	4.32	3.18	2.41	4	13.92	-
Kenya	5. Establishment of the Upper Tana Nairobi Water Fund (UTNWF)	IFAD	2	1	1	4	7.85	
Malawi	6. Enhancing the resilience of agro-ecological systems	IFAD	1.5	1	1.5	4	7.8	
Niger	7. Smallholder agricultural development programme	IFAD	3.35	0.5	0.55	4	8.323	

Nigeria	8. Fostering Sustainability and Resilience for Food Security in Nigeria	UNDP	1	2.8	0.2	4	7.782	- 0.642	7 139 450
Senegal	9. Agricultural Value Chains Support Project	IFAD/UNIDO	3	0	1	4	7.869	- 0.649	7 219 450
Swaziland	10. Climate-Smart Agriculture for Climate-Resilient Livelihoods (CSARL)	IFAD	2.91	0.5	0.6	4	7.86	- 0.6489	7 211 009
Tanzania	11. Reversing Land Degradation trends and increasing Food Security in degraded ecosystems of Semi-arid areas of central Tanzania	IFAD	1	2	1	4	7.8	- 0.644	7 155 963
Uganda	12. Fostering Sustainability and Resilience for Food Security in Karamoja sub region.	UNDP/ FAO	2.1	0.6	1.28	4	7.7	- 0.642	7 139 450
Regional	13. IAP Coordination & Cross-cutting	IFAD					11.8	- 0.9	10 738
	Subtotal		31.67	13.29	14.02	58.9	115	9 572 336	106 359 290
	Total								

a/ Total amount of child project concepts should equal the GEF program financing requested and consistent with Tables A, B and D.

1 Figures include PPG

2 Total excludes PPG as done in the child projects

ANNEX B: AFRICAN TARGET GEOGRAPHIES

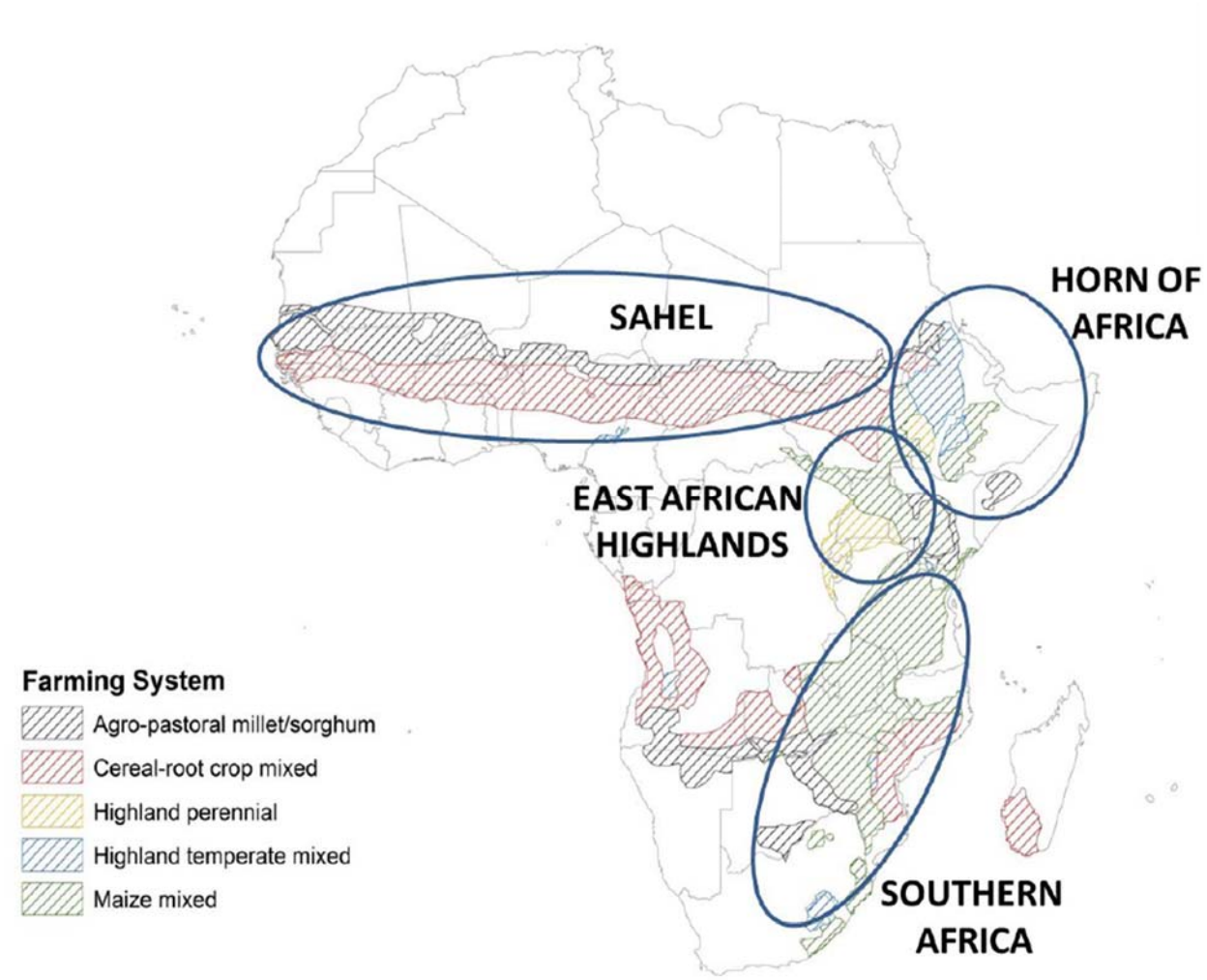

Figure 1. African target geographies selected for the IAP-Food Security.

The **Sahel** target geography is defined as the portion of the Guinea-Savanna agro-ecological zone that is dominated by agro-pastoral and cereal-root crop mixed farming systems. The cereal-root crop mixed system lies within the northern part of the Guinea savanna zone, which in recent years has been

recognized as an area of major potential growth in Africa's agricultural sector[18], although this requires major investments in improving market access as well as improved access to agricultural services to support crop diversification. At present most farming is of annual crops using minimum inputs and producing very low yields. The agro-pastoral millet and sorghum farming system is drier and households face significant risks of drought as well as crop loss from pests, and livestock from poor health or theft. These areas typically have minimal access to services, and farming is inherently risky. The total area of this target zone is only slightly smaller than that of India (3.17 mill. km2 vs. 3.28 mill. km2) and its population is slightly more than Russia's (143.5 mill. vs. 142 mill.). Climate trends across the region have not been uniform, but rains have remained relatively steady in Mali, Burkina Faso and Senegal, and have even increased in Niger. Yet cereal yields are low and stagnant and the percentage of the population at risk of not covering the food requirements associated with normal physical activity (prevalence of food inadequacy)[19] is more than 30 percent in countries such as Burkina Faso and Senegal. There is thus a need to reduce the vulnerability of the population to food insecurity by stabilizing yields and reducing risk through water harvesting, adjusting timing of planting, and better integration of crop, trees and livestock.

The conventional model of high-input agriculture (mechanization, chemical fertilizers and pesticides, reliance on mono-cropping) is unsustainable and in any case beyond the reach of most smallholder farmers in the region. Many of the governments in this region have already been forced to abandon costly programs such as fertilizer subsidies, which in some cases had temporarily supported yield increases. In Mali, fertilizer use per hectare of arable land declined from 12kg in 2008 to 7.6kg in 2009, and during the same period dropped from 7.7kg to 2.1kg in Nigeria (though other countries recorded increases during the same period). Overall, agricultural extension services in the region are weak to non-existent. A strategy that links conservation farming, integrated pest management and crop-livestock integration as a pathway toward ensuring that output increases can be environmentally sustainable and within the means of smallholder farming families ("evergreen agriculture") has been proposed. In brief, this model combines low-tillage cultivation with cover crops and mulching, and growing fodder crops which are cut and carried to animals confined in pens or stalls, whose manure is then used for composting and mulching. Control of grazing is an essential element of this strategy, together with improved land husbandry to maintain soil fertility.

The **East African Highlands** target geography covers a diverse range of biomes and ecosystems due to the diversity of elevations, climatic conditions and soil types. It includes the Ethiopian Highlands and the Albertine Rift Montane Forest systems, which are globally recognized both in terms of biological importance and the level of threat in terms of deforestation and unsustainable management of natural resources, such as soil. Population densities are very high, and plot sizes tend to be very small – below one hectare on average in the highland perennial zone , and 1-2 ha in the highland temperate mixed zone. Prevalence of food inadequacy is very high and ranges from 36 percent in Kenya up to almost 77 percent in Burundi due to stagnating yields and high population growth. In order to increase yields, smallholders need better access to inputs, such as improved varieties of maize, wheat, teff and barley that can increase yields up to three times compared to traditional seeds, but availability and cost remain significant obstacles[20], as well as access to extension services and information. In order to reduce the vulnerability of the population to risks of crop failure, farming systems also need to become more diverse and resilient to changing and unpredictable rainfall patterns. Diversification potential is recognized in

[18] World Bank, 2009. Awakening Africa's Sleeping Giant: Prospects for Commercial Agriculture in Guinea Savannah Zone and Beond. Washington DC.
[19] FAOSTAT
[20] Garrity et al. 2012. Ibid.

these highlands and could include the integration of tree-based practices, such as agroforestry, in farming systems. But smallholders here, as in other target areas, also need support in accessing markets, inputs and new knowledge and technologies, as well as improved tenure rights, and training in effective systems for sustainable intensification of agriculture.

The **Horn of Africa** Target geography is to a large extent covered by arid, pastoral and agro-pastoral systems. The arid and pastoral areas are considered to have low potential for interventions to significantly improve food production and reduce poverty, while the agro-pastoral system is similar to those in the Sahel and also includes cereal-root crop mixed and maize mixed systems in Ethiopia. The World Food Program describes the Horn of Africa as the most food-insecure region in the world caused by recurring droughts and armed conflict. Prevalence of food inadequacy is thus very high - 44 percent in Ethiopia and 72 percent in Eritrea. However, in order to reduce vulnerability and risks and improve food security, there is potential for diversification of of the agro-pastoral system and to improve market access for smallholders. Management of grazing is probably the most important single intervention throughout this area, since without it other efforts such as afforestation have little chance of becoming sustainable. Sustainable management of grazing has been shown to both increase soil carbon stocks and biodiversity and several effective forms of grazing management have been documented in the Horn of Africa, such as conservancies in Kenya, and the "exclosure" system in Ethiopia which provide a basis for replication and scaling-up. The Horn of Africa target geography also includes a significant number of globally significant threatened ecosystems. A significant number of agroforestry and conservation activities have been underway for many years. However, there is little to no quantitative monitoring and assessment of these activities.

The **Southern Africa** target geography is a high-potential zone for agricultural growth and poverty reduction with the maize-mixed system being a priority, as it represents an important share of the agricultural sector in several countries in the region. The maize mixed system combines crops and livestock with maize being the predominant crop but also including a variety of other products such as pulses, oilseeds, cotton, sorghum, and millet. Cattle are the main type of livestock, supplemented with small ruminants and poultry. This system is dominated by smallholders, but in several countries there is also a well-established large, commercial farming sector with access to improved seeds, fertilizer and pesticides, and better road access to markets than in many other parts of SSA. This is reflected in much higher crop yields per hectare than in the other target geographies. There is also much less dependence on food imports. Differences across the countries are also quite pronounced, for example demographic pressure on arable land is high in Malawi, Mozambique and Swaziland, but much lower in South Africa, Namibia and Zimbabwe. Prevalence of food inadequacy is below 5 percent in South Africa, but over 40 percent in most of the rest of the region, and close to 50 percent in countries such as Malawi and Zambia. However, maize production is becoming increasingly vulnerable to heat and water stress linked to climate change. Hence, introduction of drought tolerant crops, scaling up of soil and water management and diversification are priorities in this region coupled with improved market access for smallholders.

The Southern African target geography includes a number of threatened and globally important ecosystems. The maize mixed target geography in Southern Africa affects a large area of Central and Eastern Miombo Woodlands, a small tract of highly-threatened East African Coastal Forests, East African Acacia Savannas, and the Drakensberg Montane Woodlands and Grasslands. Smallholder

intensification which improves food security while reducing the need for extension of commercial agriculture into already-threatened ecosystems represents a “win-win” opportunity in this area.

ANNEX C: Summary of Child Projects + Child Projects Concept Notes (see separate folder)

ANNEX D: PROPOSED TORS OF KEY PROGRAM BODIES

TERMS OF REFERENCE FOR THE IAP CONSULTATIVE COMMITTEE (IAP-CC)

Role of the IAP-CC

The IAP-CC will be established to monitor progress in project execution, to provide strategic and policy guidance for the whole Program; as and when required, the IAP-CC will take decisions with regard to design and implementation issues of the program as well as other issues affecting the achievement of the Program's objective. The CC will be responsible for providing general oversight of the Program and will ensure that all child projects and activities agreed upon under the GEF Program Framework Document (PFD) are adequately prepared and carried out. In particular, it will:

- Provide overall guidance to the child projects on the timeframe for meeting key Program milestones, such as CEO endorsement, mid-term and final evaluations
- Ensure that the approaches are coherent across the IAP portfolio
- Ensure that learning and scaling up mechanisms are in place and that M&E and M&A are coherently conducted across the portfolio
- Provide guidance on the harmonisation of the mechanisms for multiple stakeholder planning and investment across multiple-scales
- Ensure coherence with programme approach and results with the vison of the GEF2020 strategy
- Ensure all project documents are in accordance with the PFD.
- Provide inputs to the Program mid-term and final evaluations, review findings and provide comments for the Management Response
- Ensure wide dissemination of Program information and best practices.

Meetings of the IAP-CC

1. The IAP-CC will normally be held annually back-to-back with other high-level Africa meetings, such as AMCEN, but the Chairperson will have the discretion to call additional meetings bi-annually if this is considered necessary. Meetings of the CC would not necessarily require a physical meeting and could be undertaken electronically. No more than 8 months may elapse between CC meetings.

2. Invitations to a regular IAP-CC meeting shall be issued not less than 90 days in advance of the date fixed for the meeting. Invitations to special meetings shall be issued not less than forty days in advance of the meeting date.

3. The Program Coordination Unit (PCU) to be established by the cross-cutting regional child project will act as Secretariat to the IAP-CC and be responsible for providing CC members with all required documents in advance of CC meetings, including the annual Program M&E report, and independent scientific reviews of significant technical proposals or analyses as required. The PCU will prepare written report of all CC meetings and be responsible for logistical arrangements relative to the holding of such meetings.

Participation: The IAP-CC members will include representatives of IFAD and GEFSEC (Co-chairs), relevant GEF agencies, all participating countries, African institutions such as AU/NEPAD, and key partner institutions in charge of regional capacity building and knowledge services. The Program Coordinator to be assigned by IFAD will also be represented on the CC, in ex-officio capacity, and will be the Secretary to the CC. Other active institutions may be requested to participate as observers.

Decision-making: All decisions of the IAP-CC shall be taken by consensus.

Reports and recommendations

At each meeting, the IAP-CC shall approve report text that embodies its views, recommendations, and decisions, including, when requested, a statement of minority views.

TERMS OF REFERENCE FOR THE IAP TECHNICAL ADVISORY COMMITTEE

(IAP-AC)

Role of the IAP-AC

The IAP-AC is an advisory body to the Program that will provide advice on technical issues related to achieving global environmental, socio-economic and food security benefits at Program level. It will also when required provide technical and strategic advice on institutional frameworks and upscaling of integrated natural resources management.

It will provide feedback on the technical and scientific quality of the knowledge management products developed by the Program to support country level implementation. I will also assist with identifying opportunities for publication and wider dissemination of key scientific and technical findings of the Program.

Meetings of the IAP-AC

The IAP-AC will normally meet annualyl in connection with the IAP-CC meetings. Meetings of the AC would not necessarily require a physical meeting and could be undertaken electronically (largely through email communications and skype discussions).

Participation: The IAP-AC members will include eminent experts on integrated natural resources management, agro-biodiversity, resilience and food security and could be drawn from STAP of the GEF, CST of the UNCCD, and Africa regional and sub-regional technical institutions, such as CILSS/AGIR and IGAD.

Reports and recommendations

Key recommendations of the IAP-AC annual meeting shall be summarized in a brief report that will be submitted to the IAP-CC to inform its decisions.