



PROJECT IDENTIFICATION FORM (PIF)

PROJECT TYPE:

TYPE OF TRUST FUND: LDCF

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PART I: PROJECT IDENTIFICATION

Project Title:	Adapting Agriculture to Climate Change in The Gambia		
Country(ies):	The Gambia	GEF Project ID:¹	5782
GEF Agency(ies):	FAO	GEF Agency Project ID:	622939
Other Executing Partner(s):	Ministry of Agriculture (MOA), Department of Agriculture (DOA), Department of Livestock Services (DLS), National Agriculture Research Institute (NARI), National Environment Agency (NEA), Department of Water Resources (DWR)	Submission Date:	April 22, 2014
GEF Focal Area (s):	LDCF	Project Duration (months):	48 Months
Name of parent program (if applicable):		Agency Fee (\$):	597,394
	<ul style="list-style-type: none"> • For SFM/REDD+ <input type="checkbox"/> • For SGP <input type="checkbox"/> • For PPP <input type="checkbox"/> 		

A. FOCAL AREA STRATEGY FRAMEWORK²:

Focal Area Objectives	Trust Fund	Indicative Grant Amount (\$)	Indicative Co-Financing (\$)
Objective CCA-1 – Reducing vulnerability to the adverse impacts of climate change, including variability, at local, national, regional and global level	LDCF	3,804,103	11,819,528
Objective CCA-2 – Increasing adaptive capacity to respond to the impacts of climate change, including variability, at local, national, regional and global level	LDCF	2,484,253	9,975,000
Total project costs		6,288,356	21,794,528

B. PROJECT FRAMEWORK

Project Objective:						
1. To promote sustainable and diversified livelihood strategies for reducing the impacts of climate variability and change in agriculture and livestock sector						
Project Component	Grant Type ³	Expected Outcomes	Expected Outputs	Trust Fund	Indicative Grant Amount (\$)	Indicative Co-financing (\$)
1. Strengthening institutional and technical capacity for adaptation to climate change in agriculture	TA	1.1 Strengthened adaptive capacity of 4 target institutions at the national level and 4 regional centres to reduce risks of climate	1.1.1 Technical capacity of MOA, DOA, DLS and NARI at the national level strengthened through training of about 100 staff on climate change adaptation, diversified agriculture strategies, and rangeland management	LDCF	237,500	500,000

¹ Project ID number will be assigned by GEFSEC.

² Refer to the reference attached on the Focal Area Results Framework and LDCF/SCCF Framework when completing table A.

³ TA includes capacity building and research and development.

sector		variability and change in the agriculture sector covering 130 villages	1.1.2 Technical expertise of regional, district and village level agriculture and livestock staff on climate change adaptation improved (Training of Trainers (ToT) to regional staff 30 staff in each region; total 150 trained in 4 regions; in-service training to 50 livestock officers and 100 agricultural extension officers covering 130 villages)			
		1.2 Mainstreamed climate change adaptation priorities into 4 major national agriculture and livestock policies, plans and programmes	1.2.3 Updated national agriculture policies, strategies and adaptation plans available with priorities of NAPA and relevant investment plans and budget (at least 4 strategies/ plans with budget allocation for adaptation actions prepared and endorsed by the Government).	LDCF	142,500	400,000
		1.3. Strengthened institutional and technical capacity of two technical services and a quality control laboratory to promote value added products and to support crop diversification and improved linkages with financial institutions and markets	1.3.1. Outreach programme of the food technological services strengthened to develop and introduce new value added products to complement crop diversification (Train 16 Food Technology Services (FTS) and Horticultural Technical Services (HTS) technical staff on processing and packaging) 1.3.2 Quality- control laboratory in National Environment Agency (NEA) strengthened to monitor nutrient and chemical profiles of drought tolerant crops and varieties. 1.3.3 Entrepreneurs (300) trained on newly introduced practices and linked to financial institutions and markets to motivate growing of new drought tolerant crops and varieties	LDCF	665,000	1,250,000
2. Assessment of vulnerabilities, risks and dissemination of timely risk information to users at all levels	TA	2.1 Increased knowledge and understanding of vulnerability and risk assessment tools and agro-climatic monitoring and Early Warning systems for Food	2.1.1 Improved database, tools and methods for risk and vulnerability assessment developed at the national level and staff trained (>50 core staff at MOA, DOA, DLS and NARI trained). 2.1.2 Improved crop monitoring and early warning	LDCF	285,000	650,000

		Security by 4 national level institutions	for food security developed for national level policy decision making and to enhance effectiveness of food security emergency operations.			
		2.2 Increased understanding of climate information services by the Ministry of Agriculture and tailored climate information disseminated to targeted vulnerable communities in 4 regions	<p>2.2.1 Weather and climate forecasting customized for agriculture sector and capacity of focal unit within the Ministry of Agriculture strengthened to interpret climate information for agriculture applications.</p> <p>2.2.2 Improved weather and climate forecast information products for agriculture disseminated to wider rural communities in 4 regions</p> <p>(Focusing specifically on agriculture and food security, this component will be linked with and complement the UNEP-LDCF Climate Change Early Warning Systems project).</p>	LDCF	190,000	400,000
3. Promoting diversification of livelihood strategies and intensification of agriculture production, processing and marketing	Inv./TA	3.1 Diversified livelihoods and sources of income improved for vulnerable households and communities in 4 targeted regions	<p>3.1.1 New and location specific vegetable garden models introduced and implemented in 20 most vulnerable communities in 15 districts for increasing incomes by at least 30% (each garden with an approximate area of 2.5 – 3.0 ha and irrigation owned by the community) benefitting 3000 households</p> <p>3.1.2 Drought tolerant “hungry rice” (<i>Degetaria exilis</i>) promoted in two regions (Central River Region – North and Upper River Region) in 20 communities (500 households) with strengthened value addition (processing) and marketing</p> <p>3.1.3 Drought tolerant traditional (Palmeta) and industrial cassava (<i>escolanta</i>) demonstrated (planting materials, processing and training on packaging) and implemented in 130 communities to benefit 1200 households</p>	LDCF	1,615,000	3,200,000

			3.1.4 Beekeeping practice implemented in 100 bush fire prone villages (to reduce the risk of forest fires from unsustainable honey collection practices) and women groups are trained on beep keeping and household level processing and linked to the markets			
	Inv./TA	3.2 Strengthened climate-resilient livelihoods of target population in 4 regions by promoting sustainable crop intensification and innovative crop improvement and management practices	<p>3.2.1 Dual (grain and fodder) purpose drought tolerant grain legumes promoted as intercrops in traditional cropping systems as a climate risk management strategy at the community level (1500 households)</p> <p>3.2.2 Certified seed production of drought tolerant varieties of “hungry rice”, cassava and sweet potato promoted by strengthening 5 small-scale entrepreneurs to benefit 1500 farmers in 4 regions</p> <p>3.2.3 Improved capacity of National Agriculture Research Institute (NARI) to evaluate and protect traditional and improved varieties of crops suitable for changing climatic conditions</p> <p>3.2.4 Additional 60 hectares of area brought under cropping by developing tidal irrigation and ensuring value addition and market linkages</p>	LDCF	1,045,000	2,000,000
4. Improved livestock production and management practices for sustaining livelihoods of local communities	Inv.	4.1 Strengthened adaptive capacity of targeted local institutions and populations in 26 districts by promoting improved poultry, small-ruminantes and cattle production practices	<p>4.1.1 26 poultry producers associations strengthened in 26 districts on technical aspect with revolving funds (seed money) to members, by-laws and regulation etc., for drinkers, seeders, chicken wires (1000 farmers), provision of cokrel (5000) to improve genetic material, disease control (400, 000 birds) through vaccination and strengthening of local enterprenours to promote hatchery (6 Nos)</p> <p>4.1.2 Capacity of theGambia indigenous livestock multiplication association (GILMA) strengthened to</p>	LDCF	686,195	5,800,000

			control endemic diseases (e.g. PPR) (400,000 small ruminantas in 4 regions)			
	Inv.	4.2 Improved management and increased access of livelihood assets in 4 targeted regions to sustain sources of income by livestock dependent communities	4.2.1 "Deferred" grazing areas in 10 sites established and planting of multi purpose leguminous tree species (10 tree intensive feed gardens) 4.2.2 Livestock watering points (6 surface ponds) provided in most vulnerable communities 4.2.3 Demarcation and marking of cattle tracts supported to increase cattle access to feed during rainy season and reduce over grazing during dry season (10 sites with use of 1.5 m poles for marking cattle tracts) 4.2.4 Multi-purpose livestock grass/legume species reseeded in 10 sites (e.g Panicum, Andropogon, Stylosanthes, Cenchrus)	LDCF	820,455	6,000,000
5. Monitoring, Evaluation and Knowledge Management	TA	5.1 Project implemented with a Results Based Management framework and best practices and lessons learned disseminated widely	5.1.1 M&E system designed and field based data systematically collected to monitor project outcome indicators (AMAT tracking tools indicators) at all levels 5.1.2 Project-related good-practices and lessons-learned disseminated via publications, project website to facilitate upscaling by the Government and non-government organizations	LDCF	302,260	556,693
Sub-Total					5,988,910	20,756,693
Project management Cost					299,446	1,037,835
Total project costs					6,288,356	21,794,528

C. INDICATIVE CO-FINANCING FOR THE PROJECT BY SOURCE AND BY NAME IF AVAILABLE, (\$)

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Amount (\$)
GEF Agency	FAO through project EU MDG - Improving food security through crop production intensification and school feeding	Grant	5,394,528
GEF Agency	FAO - Global Agriculture and Food Security Programme (GAFSP)	Grant	1,400,000
Government	The Gambia's Livestock and Horticulture Development Project (LHDP) supported by IFAD	Grant	14,000,000
Government	Ministry of Agriculture (MOA)	In-kind	1,000,000
Total Co-financing			21,794,528

D. INDICATIVE TRUST FUND RESOURCES REQUESTED BY AGENCY, FOCAL AREA(S) AND COUNTRY¹

GEF Agency	Type of Trust Funds	Focal Area	Country Name/ Global	Grant Amount (\$) (a)	Agency Fee (\$) (b) ²	Total (\$) c=a+b
FAO	LDCF		The Gambia	6,288,356	597,394	6,885,750
Total Grant Resources				6,288,356	597,394	6,885,750

¹ In case of a single focal area, single country, single GEF Agency project, and single trust fund project, no need to provide information for this table. PMC amount from Table B should be included proportionately to the focal area amount in this table

² Indicate fees related to this project.

E. PROJECT PREPARATION GRANT (PPG)⁴

Please check on the appropriate box for PPG as needed for the project according to the GEF Project Grant:

	<u>Amount Requested (\$)</u>	<u>Agency Fee for PPG (\$)⁵</u>
• No PPG required		
• (Upto) \$50k for projects up to & including \$ 1 million		
• (Upto) \$100k for projects up to & including \$ 3 million		
• (Upto) \$150k for projects up to & including \$ 6 million	150,000	14,250
• (Upto) \$200k for projects up to & including \$ 10 million		
• (Upto) \$300k for projects above \$ 10 million		

PPG AMOUNT REQUESTED BY AGENCY (IES), FOCAL AREA(S) AND COUNTRY(IES) FOR MFA AND/OR MTF PROJECT ONLY

Type of Trust Funds	GEF Agency	Focal Area	Country Name/ Global	PPG (\$) (a)	Agency Fee (\$) (b)	Total (\$) c=a+b
LDCF	FAO	Climate Change	Gambia	150,000	14,250	164,250
Total Grant Resources				150,000	14,250	164,250

PART II: PROJECT JUSTIFICATION⁶

A. PROJECT OVERVIEW

A.1. Project description

The problems and root causes:

1. The Gambia, lying between latitudes 13 and 14 degrees North and longitudes 17 and 12 degrees West, is the smallest country on the African continent. It has a total area of about 11,300 km² of which 10,000 km² is land and 1,300 km² is water. The country has a Sahelian climate, characterised by a long dry season (November to May the following year) and a short wet season (June to October). The country, with an estimated population of about 1.8 million inhabitants – of whom 40 percent is under 15, is ranked 168th out of 187 countries in the 2011 Human Development Index of the UN. Fifty percent of the population is living below the USD 2 per day poverty line.

2. The agriculture sector is characterised by small-scale, subsistence rainfed crop production (mainly groundnuts, coarse grains and rice), small-scale horticultural production and traditional livestock rearing. Agricultural output is generated by roughly 70 000 farming households on 57% of arable land. Livestock production is carried out nationwide by practically all rural households, but ownership of large ruminants is more concentrated. Cattle totalling about 300 000 head are the most valuable assets in the livestock sub-sector,

⁴ On exceptional basis, PPG amount may differ upon detailed discussion and justification with the GEFSEC.

⁵ PPG fee percentage follows the percentage of the GEF Project Grant amount requested.

⁶ Part II should not be longer than 5 pages

closely followed by small ruminants comprising sheep (160,000) and goats (230,000). It is estimated that small-scale producers raise some 700 000 birds, representing 90% of the national poultry flock.

3. Gambian rangeland systems cover an area of 400,000 hectares, that is, approximately 40% of The Gambia's total area. The Gambia's rangeland system consists of natural vegetation cover (grasses, shrubs and woody plants) and agricultural lands. Crops are cultivated on the agricultural lands during the wet season and animals graze on crop residue left behind after harvesting. The natural vegetation cover is used for grazing throughout the year. Outside of agricultural lands, rangelands are characterised by poor drainage, rugged topography and often, low soil fertility.
4. The Government of Gambia has identified problems of the agriculture sector while preparing the Agriculture and Natural Resources (ANR) Policy (2009 – 2015). Agricultural production is overly reliant on one season rainfed agriculture from June to September. Rains are increasingly uncertain and unpredictable in time and volume. The absence of adequate water control measures and irrigation structures that will assure continuous production have hampered progress. Soils in Gambia are generally poor in organic matter and chemical fertility, requiring high inputs of manure and fertilizers to increase yields. Extension services are affected by low levels of skills and knowledge to transfer appropriate technologies or provide much needed advice and information to producers, in investment and management of their enterprises. In addition, relatively high incidence of pests and diseases in horticultural crops, staple food crops and livestock, significantly reduce production and quality of the commodities, and minimize the profit.
5. The production costs of livestock, particularly poultry are relatively high compared with imports, resulting from use of low outputs technologies and inefficient input supply systems. Cattle production is constrained by scarcity of feed and water during the long dry season, aggravated by rampant bush fires which consume most of standing hay, crop residues and by-products to feed cattle. Non-availability of adequate feed during the dry season and poor management of grazing lands are considered major constraint to success of livestock sub-sector.
6. Agribusiness, agro-industries, agro-processing sub sectors are characterized by numerous smallholder (household) entities using low output technologies and labour intensive systems leading to leakages, low quality and low income. Market opportunities are not easily known or accessed by small producers. Infrastructures such as warehouses to support farm to market activities such as bulk storage and handling that enhance higher margins are very limited or absent. Relatively high transport costs from production to market areas discourage producers from ensuring supplies. Financial services, particularly credit is not easily accessible to small and medium scale producers, or at best, is perceived to be expensive. Inappropriate use of available credit by the small producers themselves limits sustainability of the services.
7. Availability of water supplies particularly by small and medium scale holders in the sector, especially for the production of high value commodities is either expensive or not continuous. In addition to production constraints, institutions for policy advice, investment information, research and extension are weak in quantity and quality and are limited in resources to perform their expected tasks. The private sector operatives are few and not properly strong or prepared to take the risk and make the necessary investment.
8. Because of complex baseline problems, the household food insecurity has exacerbated the prevalence of acute and chronic malnutrition which is particularly affecting children and most vulnerable population in the country. According to the Multiple Indicators Cluster Survey (MICS) conducted in 2010, 9.5% of children under 5 are too thin for their height and 23.4% of them are stunted at the national level. Although the Government of The Gambia is committed to achieving the MDGs, more particularly with regard to the MDG-1c target, about 20% of infants have low birth weights and 20.3 percent of children under-5 are underweight, against a 10.4 percent objective for 2015 (GoTG's MDGs status report 2010). This situation is largely attributable to constraints such as reduced food availability and coping strategies during the lean season (from June to September), (ii) inadequate food utilization, (iii) limited knowledge on nutrition and (v) poor health status and hygienic practices. MDG1c targets are likely to be unmet if no specific investments are made in household food security and nutrition to accelerate joint efforts from the Government and development partners.

Climate change and likely impacts on crops and livestock:

9. According to the fourth assessment report of IPCC, Africa is the continent expected to suffer the most under climate change, both due to expected increases in climate hazards and its already high vulnerabilities to

those hazards across a range of sectors. Gambia as a Least Developed Country (LDC), is among the most vulnerable to the impacts of climate change. These vulnerabilities span many sectors, livelihoods and assets within each sector. The agriculture sector including livestock is one of the most exposed sectors to increasing climate variability and change.

10. In the Gambia, climate records indicate unequivocal negative changes in the last forty years. Analysis of rainfall in the central part of the country shows that variability is even greater at smaller time scales. Corroborating stakeholder perceptions, statistical analyses of rainfall confirm a decline in rainfall; shorter season; and, increased inter-annual variability as the most important climate risks faced by farmers. Annual temperatures have risen by approximately 1.0°C since 1960 and are expected to increase by between 1.1 and 3.1°C by 2060. According to the Second National Communication (July 2012) to the UNFCCC, statistically significant trends in historical rainfall indicate decreases during the main rainy season from July to September. Future projections of potential evapotranspiration suggest a likely increasing rates with a range of 2% to 45%.

11. Changes in the above climate-related hazards will negatively affect a range of sectors. Of particular concern is the agricultural sector which is an important component of the economy and forms the basis of many rural livelihoods. Droughts, floods and increases in temperature reduce the ability to grow crops, as well as affecting other aspects of the value chain e.g. drying/storage and transport to market. Reports suggest that there will be a 40 per cent drop in groundnut yields due to rising temperatures⁷. The inter-annual variability of yields is shown to increase in the absence of compensatory management strategies. Additionally, the disappearance of freshwater swamps and soil salinisation in lowland areas is likely to impact negatively on rice production. Elsewhere, intensive cropping and/or shorter fallow periods threaten soil fertility and the natural resource base. The dominance of heat- and drought-tolerant wild species could lead to further loss of agricultural biodiversity.

12. The detrimental impacts are not limited to crop yields, but extend to food security. Poor intra-seasonal rainfall distribution also serves to increase food insecurity and rural poverty. Grazing lands that has lost its productive capacity is unlikely to retain the rural workforce who may migrate to urban areas in search of alternative/non-farm livelihoods. In contrast to crops, research into climate-livestock interactions is more sparse and fragmented, and focuses more on rangeland productivity. According to the Second National Communication (2012), a 29 to 40% drop in live biomass, depending on species considered, is expected to accompany projected climate changes. Climate change will also change species composition, which may complicate net impact. Water and heat stress in particular are expected to take a heavy toll on perennials and shallow-rooted forage species in rangelands. In a cattle-raising system largely based on extensive common land grazing, a decline in fodder availability and quality is expected to translate into loss of animal production.

13. Higher temperatures and humidity have measurably adverse impacts on small ruminants (i.e., goats and sheep), which make important contributions to household economies. The result of intense climatic stress on free grazing small ruminants include: significant reduction in milk yields; slow growth rates; decreased reproductive rates and increased mortality rates. Increasing temperature and humidity are also expected to have a negative effect on food intake of birds, thus reducing the productivity of poultry. However, animals can be economically protected from intense climatic stress by providing adequate shelter and cooling systems. Notable adverse climate that indirectly impacts animal production include the rapid spread of animal diseases and thermophilic vectors/hosts, and increased cost of processing and marketing animal products.

14. There is a general understanding that problems associated with climate change are most severe in the semi-arid, Sudano - Sahelian zone of the country, which constitutes about 75% of the total land area. Impacts on livestock grazing system are one of the major underlying causes identified for and visible problem threatening the production base and livelihood of the Gambian population. It is perceived that impact on land-based resources is at the core of the problem, which includes decreasing vegetation cover, bush fires, encroachment on the remaining grasslands, declining soil fertility, and over-exploitation of the rangelands.

15. Changing cropping patterns and un-sustainable agricultural, livestock and rangeland management practices have been primary agents contributing to loss of livelihoods. The depletion of vegetation cover is caused by growing demand for more cash crops at the expense of mixed farming. Livestock husbandry practices of traditional herdsmen (overstocking of livestock, overgrazing and depletion of accessible water resources) have

⁷ AIACC (2006). Making Economic Sense of Adaptation in Upland Cereal Production Systems in The Gambia. AIACC Working Paper No. 37 August 2006.

contributed to vulnerability of agricultural resources to climate change impacts. Livestock owners keep large herds for reasons of social status and prestige thus over-utilising available grazing resources. The combination of individual ownership of animals and communal ownership of land leads to overexploitation of the rangeland resources.

Baseline programme

16. To address the baseline issues described above, the country has put in place a set of plans and measures. Gambia has developed its National Agricultural Investment Plan (GNAIP) which comprises six complementary programmes that build on and scale up proven approaches focusing on: improving land and water management; enhancing conservation technologies; scaling up value-added technologies, agro-business enterprises, producer organization initiatives and market integration; promoting food and nutrition security; and enhancing coordination and management including monitoring and evaluation. A number of new programs and projects in the agriculture and natural resource sector will contribute to the implementation of GNAIP. These include the following which make up the baseline programme:

17. **Capacity Development in the Global Agriculture and Food Security Programme (GAFSP) (June 2013 – May 2017).** The purpose of GAFSP is to scale up support to reduce poverty and improve food security by increasing agricultural productivity, linking farmers to markets, and improving non-farm rural livelihoods. Specific objectives of the GAFSP in The Gambia are to increase food and nutrition security and household incomes particularly of vulnerable populations in three target regions with high food insecurity (West Coast Region (WCR), Lower River Region (LRR) and Central River Region (CRR)). FAO and AfDB have been designated co-supervising entities for GAFSP funds. FAO is responsible for Technical Assistance (TA) Component and AfDB for Investment Components. FAO will implement capacity development activities prioritizing: improved agricultural practices, and commercialization and improved approaches to nutrition and food security. Gambia was awarded a USD 28 million grant in May 2012 to implement the programme over a five-year period. The FAO TA component totals USD 1.4 million.

18. GAFSP components, in line with GNAIP priority programmes, include: (i) Component 1- Improved agriculture, land and water management. This component aims to address barriers to agricultural production and productivity while sustainably managing natural resources. Component activities will focus on the provision of infrastructure for enhancing productivity of smallholders in the production of food crops as well as support horticulture, aquaculture and livestock production; (ii) Component 2 - Smallholder agriculture commercialization aims to promote a market-led, private sector environment to foster smallholder commercialization through development of agro-processing enterprises (capacity building of farmer-based organizations, small-scale processing infrastructure), facilitating market access (strengthening national market information system, expanding market linkages through improved infrastructure); (ii) Component 3 – Integrating improved approaches to food security is aimed at improving household food security and nutritional levels, targeting the most vulnerable groups and households. This will be achieved through addressing malnutrition (national school feeding program, nutritional education) and building household resilience (expanding access to seed and cereal banks, strengthening decentralized contingency planning, participatory policy development); and (iv) Component 4 – Strengthening GNAIP coordination and management.

19. **EU-MDG initiative on “Improving food security through crop production intensification and school feeding program (GCP /GAM/026/EC)”** (Feb 2013 – Dec 2016 with possible extension). Specific objectives of the project are: (i) to increase household food security and incomes of participating farmers; and (ii) to enhance nutritional status of targeted school children through School Feeding Programme. Activities to achieve the first objective will focus on rehabilitation/construction of irrigation infrastructure and building the capacity of local institutions/ communities to improve water control, improving access to agricultural inputs and services, and improving post-harvest practices and expanding market opportunities. The project targets districts in Lower River Region (LRR), Central River Region (CRR), Upper River Region (URR) and North Bank Region (NBR). The project area was selected using vulnerability analysis and mapping approach. The total budget for this project is Euro 7.6 million and out of which the budget covering contributing agreement with FAO is USD\$ 4,149,637 that is approximately equivalent to USD 5.39 million.

20. **The Gambia's Livestock and Horticulture Development Project (LHDP)** (May 2009 – Dec 2015) is being implemented with an overall development goal of “Reducing rural poverty by raising the incomes of rural producers”. The project is funded through AfDB and IFAD grants. Specific objectives of the project are to: i) improve the returns to kafo-run horticulture and livestock production, and ii) build up capacities at the

grassroots level. The project targets production, processing and marketing of livestock and horticultural products at the community level. Specific interventions include Small Ruminant (SR) and poultry production and marketing and value-chain integration/upscaling (e.g. to address small blockages in value chain and/or upscale promising technologies) (new focus Provision of extension services (motorcycles and training). Training (of villagers) in good agricultural practices (GAP), in group entrepreneurship development and training of front-line staff. The project targets districts in West Coast Region (WCR), Lower River Region (LRR), Central River Region (CRR), Upper River Region (URR) and North Bank Region (NBR).

Barriers, long-term solutions and alternate scenarios:

21. The baseline projects will make a significant contribution to addressing issues mentioned. However, these do not adequately address the following barriers to climate change adaptation and improved livestock and rangeland management for food security and environmental sustainability: (i) Insufficient institutional and technical capacity for adaptation to climate change in agriculture sector, (ii) inadequate data and information on vulnerabilities, risks and lack of communication of timely risk information to users at all levels (including farmers); (iii) heavy dependence of smallholder farmers on monocropping and lack of diversification and inadequate linkages between agriculture production, processing and marketing; (iv) degradation of rangelands and loss of livelihoods depending on livestock enterprises.

22. The Gambia's Thematic Assessment of Capacity Building Needs⁸ in the Area of climate change, and Desertification Control Conventions highlights the gaps in enabling environment for an effective climate change adaptation and sustainable agriculture. This capacity building need would require instituting appropriate institutional frameworks; providing research, training, education and scientific and technical supports in specialized fields relevant to climate change adaptation and also creating public awareness in climate change related issues. The thematic assessment further highlights gaps in skills for vulnerability and adaptation assessment. The capacity building needs include the ability to conduct in-depth assessment of the impacts of climate variability and future climate change and identifying and developing measures to adapt to future climate variability and change.

23. Low level of scientific and technical capacity for effective climate change adaptation constraint has individual, institutional and systemic capacity needs dimensions which include training of Gambian agricultural experts in specific aspects of assessment of impacts of climate change in agriculture and formulation of adaptation strategies and establishment of technology assessment and procurement facilities; and networking climate change actions at country level. The decision-making processes for sustainable climate change adaptation in agriculture require appropriate information that assist the policy- and decision-makers to arrive at well-articulated and relevant policies and plans that systematically integrates climate change concerns. Similarly, inadequate, weak and ineffective research – development linkages in the agriculture sector reduces transfer of technology from research to farmers. This capacity issue is common to both the agriculture and livestock sub-sectors.

24. Inadequate data and information on vulnerabilities, risks and lack of communication of timely risk information to users at all levels (including farmers) limits adaptation at the local level. Inconsistent use of different information sources and lack of clear mandate for interpretation of climate information may lead to wrong decisions in the agriculture sector. There needs to be an official process for generating warnings that include communication between climate information providers and agriculture departments and communities where impacts are experienced. There is insufficient capacity within the Ministry of Agriculture (MOA) to translate generic information into agriculture specific impact outlooks and alternate management plans. Without translation into information that can be easily understood by users, the information is unlikely to be used. It is also important to combine this information with known vulnerabilities and risks. There is a gap in terms of vulnerability assessment in agriculture and livestock sector at the local level.

25. Dependence of smallholder farmers on monocropping and lack of diversification and inadequate linkages between agriculture production, processing and marketing is a barrier to advance adaptation. Rainfed agriculture is a major source of employment and livelihood in The Gambia. Erratic rainfall patterns and increasing drought frequency are implicated in soil degradation, decline in production of traditional crops, deepening poverty and food insecurity of farming households. Direct effects of the rainy season characteristics lead to loss of soil fertility, lower production, and loss of household income. The farming households have

⁸ National Capacity Self Assessment (NCSA) Project, Thematic Assessment of Capacity Building Needs in the Areas of Biological Diversity, Climate Change, and Desertification Control Conventions July, 2003

evolved and still rely to some extent on operational changes in farming activities, spreading risks, sharing losses (kinship networks) and other risk management strategies (sale of assets, harvesting of natural forest food). All these efforts are ad-hoc and mostly reactive emergency mode and are not sustainable. In additional sustainability of these interventions depends heavily on the strong linkages between production, processing and marketing.

26. Climate impacts on rangelands and constraints for livestock rearing poses a threat to rural livelihoods depending on livestock enterprises. Farmers' readiness for production-oriented investments into livestock is extremely low. It is against this background that donor interventions in the livestock sector have been few in the past when compared to other sectors. There is a clear need, especially for the Department of Livestock Services (DLS), to increase action-oriented and community based extension with a view to developing intervention packages. The technical interventions in livestock and range management are: agro-forestry, promotion of biological N-fixation multipurpose tree species, controlling of livestock traffic and livestock numbers, integration of livestock-crop farming and forestry, and sustainable land and range management. The objective should be to reduce the acute pressure on pastures and feed resources by better matching livestock requirements with the natural resource base and by increasing the efficiency of conversion of the natural resources into farmers' income.

Description of components, expected outcomes and incremental cost reasoning of the project

27. Against the background of baseline problems and projected impacts of climate change, adaptation activities in the agricultural sector can be linked to two priorities: 1) promoting diversification of livelihood strategies and intensification of agriculture production, processing and marketing, and 2) improved livestock production and land management for sustaining livelihoods of local communities. These priorities, which are being addressed through the baseline projects described above, need to be complimented with cross cutting elements: (1) Strengthening of institutional and technical capacity of agricultural services to promote adaptation and (2) assessment of vulnerabilities, risks and dissemination of timely risk information to better plan crop and livestock management practices.

28. Additional activities requested for LDCF financing include implementing the priority projects of NAPA priority project 3 – Diversification and intensification of agricultural production, processing and marketing and 8 – Improved livestock and rangeland management for food security and environmental sustainability. Emphasis will be given to address issues at the local level aiming to reduce the vulnerabilities and enhance adaptive capacity. The project will be implemented in the most vulnerable 4 regions presented in the table.

Target regions, districts and associated climate impacts on agriculture and rangeland systems

Region	Number of target districts	Climate impacts on agriculture and rangeland systems
Lower River Region (LRR)	2	Farming and animal husbandry which constitute a source of livelihood for more than 65 per cent of the population could be harmed by erratic rainfall patterns, contraction of shrub savannah and bush fires.
Central River Region (CRR)	10	Agricultural and horticultural production in the region would become increasingly costly to protect from natural hazards. Dry season cattle grazing is a challenge faced by cattle herders. As much as 90 to 95 per cent of the population who are engaged in agriculture and husbandry may need to make some tough choices in keeping with expected changes in rangeland and agricultural productivity. It is notable that attempts to bring marginal land into production runs the risk of irreversible degradation. Direct impacts of erratic rainfall and higher temperatures include lower groundwater recharge and low availability of water sources..
Upper River Region (URR)	7	In high elevation frontier areas dominated by shrub savannah, erratic rainfall and higher temperatures may constrain the survival of annual species. These are likely to be replaced by grasses and species with higher tolerance of environmental stress. Habitat loss would compound the threat to many plant species normally associated with shrub savannah. Medicinal plants and valuable grazing may be lost in the transformation process. Torrential and unseasonal rains are also likely to take a heavy toll on agricultural production. In general, inter-annual variability of crop

		yields is expected to increase.
North Bank Region (NBR)	7	Cultivation patterns and choice of crops may come under increasing pressure to adapt to circumstances. As a counter-measure to saline intrusion, higher investments would be required to maintain and protect rice cultivation in seasonally flooded freshwater swamps. Subject to radical management changes, open grazing may no longer be sufficient to maintain the quality of livestock products.

Component 1: Strengthening of institutional and technical capacity for adaptation to climate change in agriculture sector

29. **Baseline:** Two subcomponents under the Livestock and Horticulture Development Project (LHDP) focus on the capacity development. Activities are i) extension services delivery and training of frontline staff; ii) training of kafo members on: good agricultural practices, including post-harvest handling of produce and modern, market-oriented animal husbandry; entrepreneurship development. Technical training is being provided mainly by the line departments of MOA and/or by the implementers/partners of agricultural development projects. Training on business development skills, entrepreneurship, good governance and other topics, including nutrition education, etc., is provided mainly by experienced NGOs.

30. Capacity Development in the Global Agriculture and Food Security Programme (GAFSP) project includes a sub-component that covers training of smallholder Farmer-Based Organizations in aspects of agro-processing, business management and marketing, enabling their engagement in agricultural commercialization activities, as well as training of relevant government units including the Ministry of Agriculture (MOA) in market information and infrastructure management. The above baseline interventions with a co-financing amount of USD 1.4 million from the technical assistance sub-component of GAFSP project and USD 0.75 million from the two capacity development related activities (para 29) of Livestock and Horticulture Development Project (LHDP) are mostly related to strengthening of institutional and technical capacity related to regular production technologies. Climate change adaptation aspects are not covered under the baseline projects. The LDCF resources are required to incorporate additional elements related to climate change adaptation, specifically promoting diversified climate-resilient livelihood strategies and crop and livestock production, processing and marketing of new varieties and crops.

31. **Additional activities and adaptation benefits:** Additional LDCF financing (USD 2.15 Million) from the proposed project will be used to strengthen the technical capacity in the Ministry of Agriculture (MOA) and its departments (DOA, DLS and NARI) at national, regional and district level on climate change adaptation, diversified agriculture strategies and rangeland management. This will be achieved by assessing training needs in crop and livestock sector and conducting need-based training programmes. Capacity development efforts will also target the district field offices and community-based organizations. To sustain the training programmes beyond the project cycle, the training curriculum will be integrated into the DOA and DLS regular/annual training activities. This project will strengthen the outreach programme of the food technological services to develop and introduce new value added products to complement crop diversification (Train 16 staff from Food Technology Services (FTS) and Horticultural Technical Services (HTS) technical staff on processing and packaging). The LDCF resources will be used to train 300 local entrepreneurs on newly introduced practices and train them on financial and market linkages.

32. In addition, the quality control laboratory in National Environment Agency (NEA) will be improved to monitor nutritional profiles of diversified crops and varieties proposed under the output 1.3 of the project. The additional activities will also seek to establish a mechanism for information exchange, collaboration, coordination between the Ministry of Agriculture (MOA) and other Ministries with regard to climate change adaptation. Enhanced technical and institutional capacity and readiness to respond to climate change impacts and mainstreaming of adaptation into national agricultural policies, plans and programmes are the expected adaptation benefits from the LDCF resources. The indicators to quantify the results of the Component 1 are number of staff trained (gender disaggregated) in prioritization and implementation of adaptation priorities, number of Training of Trainers (TOT) with improved technical expertise at local level, training manuals and curriculum integrated into the Government's regular activities, number of updated national agricultural strategies integrating adaptation priorities with budget allocation prepared and endorsed by the Government.

Component 2: Assessment of vulnerabilities, risks and dissemination of timely risk information to users at all levels

33. **Baseline:** Information about vulnerabilities, risks and impacts on agriculture systems needs to be completed for better adaptation planning. Assessment of vulnerabilities and impacts and provision of early warning for food security in the Gambia are crucial. Currently, the Multi-disciplinary Working Group of the AGRHYMET Regional Programme is providing a monthly early warning bulletin for food security in the Gambia. The report covers synoptic situation, rainfall situation, outlook for the following dekad, agro-meteorological situation, and agricultural situation. The usefulness of this Early Warning Information needs to be improved by incorporating new tools and methods.

34. The technical assistance under this component of improving early warning for agriculture will be cost effective and timely if implemented urgently in coordination with GEF/LDCF/UNEP project on “Strengthening climate services and early warning systems in the Gambia for climate resilient development and adaptation to climate change - 2nd Phase” being implemented with the Department of Water Resources (DWR). The current level of expertise on tools and methods for risk and vulnerability assessment and methods of crop monitoring are not sufficient for designing location specific adaptation practices. Further, the risk and vulnerability assessment conducted for preparation of second National Communication is not sufficient to plan for adaptation in the agriculture sector.

35. **Additional activities and adaptation benefits:** Component 2 of the proposed project will be closely coordinated with the LDCF project on “Strengthening climate services and early warning systems in the Gambia for climate resilient development and adaptation to climate change – 2nd Phase of the GOTG/GEF/UNEP LDCF NAPA” in close collaboration with Department of Water Resources. The LDCF resources will be used to improve application of climate services and early warning systems in agriculture and livestock sector by improving crop databases, tools and methods for vulnerability and risk assessment and define the hotspots of vulnerability focusing on crop and livestock production. The proposed project will improve the capacities of more than 20 staff in MOA, train them on assessment tools and methods through the Training of Trainer’s (ToT) model, to ensure sustainability. The project, building on previous experiences, will improve the quality of Early Warning Bulletins for Food Security in The Gambia and facilitate its outreach within the Government institutions and local communities in all selected regions for on the ground decision making. It will also help establish a focal unit (limited trained experts) within the Ministry of Agriculture (MOA) at national level, to receive climate services and early warning systems and to communicate them to regional and district level offices and end-users (farmers and livestock herders). Close consultations with MOA and GEF agency of the GOTG/GEF/UNEP LDCF project is expected to ensure the sustainability of the unit after end of the project by provision of Government budget.

36. The adaptation benefits of the GEF intervention will be: i) consolidated climate and crop databases for decision making in agriculture; ii) tools and methods of risk and vulnerability assessment; iii) improved methods of crop monitoring; and iv) improved forecast products developed at the Department of Water Resources (DWR) for agriculture application and disseminated to rural produces in 4 regions. This will contribute to increase the adaptive capacity of government institutions and local farmer groups. The indicators for these outputs will be: i) availability of updated risk and vulnerability assessments in 4 regions; ii) a new system in place at the Ministry of Agriculture (MOA) to disseminate timely risk information; and (iii) at least 4 regions and 100 farmers groups are receiving early warning information products for pro-active decision making.

Component 3: Promoting diversification of livelihood strategies and intensification of agriculture production, processing and marketing

37. **Baseline:** The baseline project “Improving food security through crop production intensification and school feeding programme” focuses on improvement of smallholder agricultural production through improved water control, access to inputs and services, and improving post-harvest practices and expanding market opportunities in order to increase smallholder household incomes. In collaboration with National Agricultural Research Institute (NARI), the project promotes the development of seed grower cooperatives and food crop groups, commercial contracts are also encouraged. Similarly, in partnership with the technical services of MOA, a package of interventions to support sustainable intensification of smallholder’s crop production will be proposed through Farmer Field Schools.

38. This baseline project is in line with the priorities of the Government and some activities are relevant to priorities identified under project 3 of the NAPA. However, these activities have not explicitly considered climate related risks and vulnerabilities and suitable diversification and intensification. Additional efforts are

required to address the needs of local communities considering climate risks and vulnerabilities in a comprehensive manner. Interventions can be tailored to address the immediate risks of climate variability and also considering future impacts of climate change.

39. Without LDCF resources, adaptation practices to be implemented at the local level through the above baseline project may not match the climate related risks and vulnerabilities explicitly. Community-based stakeholders also need awareness-raising on climate change adaptation practices in agriculture. With LDCF resources, it would be possible to strengthen the baseline project initiatives considering the impacts of climate variability and climate change. The resources will help to strengthen the baseline project and systematically package tested adaptation practices and new stress-tolerant varieties of crops and promote diversification of livelihood strategies and intensification of agriculture production, processing and marketing.

40. **Additional activities and adaptation benefits:** The main aim of this component is to promote diversification of livelihood strategies and intensification of agriculture production systems to better manage climate risks and vulnerabilities, processing and marketing to enhance the effectiveness of baseline project activities. Adaptation benefits will include introduction of innovative location specific vegetable garden models in 20 most vulnerable communities in 15 districts for increasing income by 30% benefitting 3000 households. In addition, diversification strategy will include introduction of drought tolerant Findo (hungry rice), traditional and industrial cassava and also bee keeping to promote income opportunities for rural women. Primarily, bee keeping (output 3.1.4) at household level is included as an alternate income generation activity for women. Nonetheless, this practice is climate-resilient and can reduce the risk of bush fire during extended dry conditions mainly caused by breaks in rainy season. The local communities often make fire to drive honey bees while honey collection and during dry season this often lead to widespread bush fire and causes extensive damage to livelihood assets. Bee keeping at household level can reduce unsustainable honey collection from the forests by making fire. Honey bees are efficient pollinators in a number of crops and bee keeping at household level can improve pollination in field crops and thereby increased yield and production could be achieved. Similarly, there are activities that promote sustainable crop intensification that consider climate risks and vulnerabilities; and these practices include: promoting dual purpose grain legumes, certified seed production of drought tolerant varieties of crops, evaluation of varieties of tomato and onion for rainy season and additional area under cropping through tidal irrigation.

Component 4: Improved livestock production and management practices for sustaining livelihoods of local communities

41. **Baseline:** The baseline project “The Gambia’s Livestock and Horticulture Development Project” focuses on reducing rural poverty by raising the incomes of rural producers. The focus is to improve the returns from horticulture and livestock production, and build capacities at the grassroots level (as mentioned under Component 1 above). The project targets production, processing and marketing of livestock and horticultural products at the community level. Specific interventions include small ruminant and poultry production and marketing and value-chain integration/upscaling (e.g. to address small blockages in value chain and/or upscale promising technologies). The LHDP project also focuses on provision of better extension services and promoting locally relevant production and livestock management practices and group entrepreneurship development. The major weakness is that these practices are not directly addressing climate related risks to livestock sector as articulated in NAPA priority project 8 that is relevant to this component. It is necessary to facilitate a location specific process to promote implementation of improved poultry, small ruminants and cattle production practices for enhancing adaptive capacity and sustainable livestock production.

42. Under component 1 (Improved agriculture, land, water and nutrient resources management) of The Global Agriculture and Food Security Programme (GAFSP) activity 6 focuses on (i) capacity building of communities in sustainable soil and water management techniques and capacity building on agro forestry, range management and biodiversity conservation techniques using farmer field school approaches. The outcome of the capacity development at the local level should be complimented with on the ground implementation of the technologies. This baseline activity would be strengthened by closely linking the expected output 4.2 on improved SL/WM intervention to improve vegetative cover and to sustain livelihoods of livestock dependent communities.

43. **Additional activities and adaptation benefits:** The proposed project will focus on improving poultry, small ruminants and cattle production considering the risks of climate variability and climate change. Additional activities will focus on local community groups to enhance effectiveness and for wider

dissemination. In that respect, the poultry producers associations in 26 districts will be strengthened on technical aspects with revolving funds to members and by strengthening by-laws and locally acceptable rules and regulations for provision of drinkers, seeders, chicken wires to 1000 farmers and provision of 5000 cockerel to improve genetic material so as to match the climatic risks. Disease control measures will be strengthened to benefit 400, 000 poultry birds in selected villages through better vaccination. The resources will also be used to strengthen local entrepreneurship to promote hatchery. Additional activities also include strengthening of The Gambia Indigenous Livestock Multiplication Association (GILMA) to control endemic diseases and this will benefit 400,000 small ruminants in 4 regions.

44. Improved production and management practices will be carried out to improve vegetative cover and to sustain livelihoods of livestock dependent communities. This includes establishment of “deferred” grazing areas in 10 sites + planting of multi purpose leguminous tree species (10 intensive feed gardens). Livestock watering points (surface ponds) are necessary to support the most vulnerable communities. Tree intensive feed gardens will protect the natural assets and provide necessary livestock fodder during the dry season. Demarcation of cattle tracts are planned to increase cattle access to feed during rainy season and reduce over grazing during the dry season. Re-seeding with multi-purpose livestock grass/legume species (e.g Panicum, Andropogon, Stylosanthes, Cenchrus) is expected to improve natural assets of the livestock dependent communities.

45. Improved management of livelihood assets to sustain livelihood activities of livestock dependent communities will improve grazing areas, multi-purpose leguminous tree species and improve water storage capacity of the grazing lands and innovative tree intensive feed gardens. Support to demarcate cattle tracts will increase cattle access and reduce over grazing during the dry season. The intervention will promote regeneration of vegetation through the adoption of new practical silvicultural practices and improved management of grazing lands that in turn will improve the productivity of rangelands.

Component 5: Monitoring, Evaluation and Knowledge Management

46. The performance monitoring will rely essentially on the project M&E system. The M&E system will specify the impact, outcome and output indicators, the activities to be performed, the methodology, and clarify the roles and responsibilities of partners and stakeholders. The monitoring and evaluation system will include outcome and output indicators of the Adaptation Monitoring and Assessment Tool (AMAT) relevant to LDCF objectives 1 (reducing vulnerability) and 2 (increasing adaptive capacity). Outcome and output indicators, targets and baseline will be established during the full proposal preparation stage. The impact of adaptation practices and improvement of adaptive capacities and livelihoods, will be assessed through surveys (farmer groups and households) and will be compared against the initial baseline scenario. Best climate change adaptation practices will be screened based on the indicators: environment friendliness, potential to reduce the impacts of climate risks, economic viability, sustainability, social acceptability, gender sensitivity, income generation, enterprise diversification, seasonal relevance and community’s need. The GEF funds will be used to carry out a mid-term and a final evaluation, and to disseminate good practices and lessons-learned for up-scaling by the partners and stakeholders.

Innovativeness, sustainability and potential for scaling-up

47. The project is firmly rooted in a number of policies and programmes of the Government of the Gambia notably, the Agriculture and Natural Resources Policy (2011) and its investment arm; the Gambian National Agriculture Investment Plan (GNAIP, 2011 – 2015); a national framework for the accelerated growth, poverty reduction as well as food, nutrition and income security. This provides opportunities to scale-up the project initiatives by the Government and other partners. Principles and support to good governance and equitable, rights-based people-centered approaches will be incorporated in the project and be the basis of implementation strategies as well as the monitoring at the local level. Applying inclusive participatory process for decision making and implementation, and capacity development, will enable the poor and most vulnerable to engage in and benefit from activities and take ownership of the interventions. Civil society and private sector will be encouraged to be involved and thus providing opportunities for providing continuous support so as to sustain the efforts at the local level.

48. The efforts at the local level will be complemented by capacity development activities with the Government institutions at the national, regional and district levels to provide continuous support services to promote local actions aimed at reducing vulnerability and interventions on sustainable land and water management. There are number of interventions integrated into the outputs that have potential for

environmental sustainability. The project has innovative elements especially by leveraging the benefits of the research – development linkages to ensure transfer of new technologies to the local communities, linking the farmers with entrepreneurs and subsequently to the market. The underutilised crop species having adaptation and income generating potential will be promoted and these activities are closely linked to mandates of research institutions for further improvement and up-scaling.

A.2 Stakeholders. Identify key stakeholders (including civil society organizations, indigenous people, gender groups, and other as relevant) and describe how they will be engaged in project preparation.

49. There are number of stakeholders identified during the PIF preparation phase through national level consultations. The expected specific roles and responsibilities of the stakeholders were agreed in principle and detailed discussion will be conducted during the PPG stage to elaborate the technical and in-kind contributions. It is also expected that ~~the~~ there is a scope for additional organizations and agencies to participate in the project preparation and implementation. The priorities and perspectives of the local communities and most vulnerable populations (e.g. women) will be reflected into the project document during the project design phase. Their participation during the project preparation phase will be achieved by development and implementation of a detailed stakeholder and beneficiary engagement plan. A national expert on socio-economics, livelihoods and community mobilization will be engaged for this purpose and she/he will be part of the project preparation team. The community mobilization expert will mainly focus on stakeholder engagement especially women, civil society organizations, indigenous communities and other relevant beneficiaries. FAO’s tools and methods for community mobilization for planning for adaptation⁹ will be adopted to ensure inclusion of women and most vulnerable communities.

Key stakeholders	Role and responsibilities	Potential benefits
Ministry of Agriculture (MOA)	Lead national implementing partner. The MOA will be the chair of the Steering Committee and draw members from other ministries and its departments.	Improved capacity to contribute to climate change mainstreaming into the agriculture Policies and Plans
Ministry of Fisheries, Water Resources and National Assembly Matters	UNFCCC and NAPA focal point	Improved capacity and opportunity to incorporate climate change into relevant policy instruments
Ministry of Finance and Economic Affairs	Provision of funds for all government contributions into the project. Steering committee member	Improved understanding of potential negative impact of climate change events on national development and economic goals with respect to the Agriculture sector.
Ministry of Forestry and Environment	Focal Ministry for MEAs (UNFCCC, UNCBD, UNCCD); Member of Project Steering Committee	Improved capacity in the implementation GEF projects and tracking of outcomes and outputs.
Ministry of Local Government and Lands	Steering Committee Member; advocate for policy support to climate risk reduction for local communities	Improved capacity to integrate climate change concerns in development issues at the local level
Department of Water Resources (DWR)	Main player in climate and weather data collection, monitoring, processing, analyses and translation into forecasts, outlooks, and early warnings.	Improved coordination of this project with the proposed LDCF project on “Strengthening climate services and early warning systems in the Gambia for climate resilient development and adaptation to climate change – 2nd Phase”
Agricultural Communications Unit	Member of project coordinating unit and steering committee. Contribution to developing communication aspects of the project	Improved capacity for development and dissemination of risk information to all stakeholders in the country and also to the local communities through regional and local offices.
National Planning Commission	Steering committee member; Linking project goals with overall Government policy	Better incorporation of climate change concerns in agriculture sector into relevant policy instruments
National Environment Agency (NEA)	Steering committee member; strong participation in sensitization for sectoral climate proofing.	The output 1.3.3 on “Strengthen the quality control laboratory in National Environment Agency (NEA) to monitor nutrition and chemical profiles of diversified crops and varieties” will be implemented by NEA.

⁹ E-learning tool on community based adaptation to climate change: <http://www.fao.org/climatechange/67624/en/>

Key stakeholders	Role and responsibilities	Potential benefits
Department of Agriculture	Promoting livelihood diversification and intensification to farmers (crop & livestock), community mobilization, and local monitoring, compilation of feedback from farmers.	Enhanced capacity on climate change adaptation through training and learning by doing at the local level.
National Agricultural Research Institute (NARI)	Steering Committee Member. Advice on adaptation measures related to agricultural activities at project sites (planting dates, types of seeds, water harvesting, etc.),	Strengthening Research and Development linkages; Implementation of project activities relevant to stress tolerant crops and improved crop varieties.
Department of Community Development	Active participation in pilot studies on effective two-way communication	Improved understanding of climate risk reduction issues and delivery at community level
National Farmers Platform	Member of the Steering Committee; advocacy for increased project benefits to farmers.	Improved awareness and capacity in climate change adaptation.
Gambia indigenous livestock multiplication association (GILMA); Poltry Producers Associations	Active participation to facilitate implementation of the project activities to improve desired outputs.	Strengthening the capacity of local organization to better prepare to address the impacts of climate change locally.
Local communities (most vulnerable and ethnic populations)	Direct beneficiaries	In the North Bank, Upper River and Lower River regions, about two thirds of the population is poor. There are 8 main ethnic groups in the Gambia. The project will target most vulnerable populations (especially women and rural youth) and ethnic groups.
UNEP	Steering committee member	Increased experience in implementing LDCF projects and coordination of activities to enhance complementarity.
UNDP	Steering committee member	Increased Inter-agency cooperation in assisting The Gambia in reducing vulnerability to climate change.
Action Aid	Advice on assessment of local needs and advocacy related to access and ownership of resources especially by Women.	Improving project's outputs and outcomes especially related to targeting of vulnerable communities.

A.3 Risks. Indicate risks, including climate change risks, potential social and environmental risks that might prevent the project objectives from being achieved, and, if possible, propose measures that address these risks to be further developed during the project design (Table format acceptable).

50. This project presents low to medium risks since there is a strong commitment from the Ministry of Agriculture and the Government of The Gambia to implement the activities proposed under NAPA priority projects 3 and 8. The baseline projects provide a strong foundation to ensure community participation and linking the diversification and intensification and livestock management strategies to processing and market opportunities.

Risk	Level	Mitigation
The availability of credible and timely data to inform targeting of beneficiaries	Medium	Efforts will be undertaken to collate data from recently completed or ongoing nationwide surveys (Integrated household survey, Country status report). Collaborative arrangements with initiatives such as Food Security Monitoring System (FSMS) will be established to collate additional data and also for validation.
Insufficient institutional support and political commitments	Low	The proposed project is strongly supported by the Ministry of Agriculture (MOA), and the GEF focal point in The Gambia. Direct linkages to existing and planned baseline project/development activities implemented by the Government, FAO and other partners will provide a strong foundation to mitigate this risk.
Inadequate capacity at national, local and community level to support diversification	Low to Medium	The project will specifically target capacity development at national, regional and local community levels to strengthen the work of climate change adaptation. It will build on practices and principles already tested

Risk	Level	Mitigation
and intensification; livestock and rangeland management is just emerging and may be difficult to operationalize effectively.		through the current FAO projects on Food Security through Commercialization of Agriculture (FSCA) and the Gambia Livestock and Horticulture Development Project (LHDP).
Work progresses in a compartmentalized fashion and there is little integration into the government departments.	Medium	The PIF preparation mission has discussed these aspects with the Government counterparts and it was agreed that the interventions will clearly link to the ongoing Government and donor funded programmes. The output 1.2.3 under Component 1 focuses on mainstreaming of climate change adaptation into policies and plans and which will be carried out through a consultative process by engaging all relevant Government Ministries and Departments.
Impacts of increasing climate variability may increase to the extent that even if the project implements activities to improve livelihood diversification at local level, it may not be enough to make a difference. The diversification and intensification strategies may also lead to emergence of new threats such as pest and disease infestations.	Low to medium	The project will make sure to implement a suitable approach to diversification, intensification in crop production and better livestock management that underpins fundamental scientific principles and participatory methods and mechanisms that will enable stakeholders to adopt suitable measures. The project will not be designed to respond rigidly to one threat or another – it will seek to put in place processes and tools that will enable beneficiaries to adapt diversification and intensification strategies so that they translate into practical, improved management on the ground for any given context defined by any given threat.

A.4 Coordination - Outline the coordination with other relevant GEF financed and other initiatives

51. The proposed project will work in cooperation with other initiatives taken by the Ministry of Agriculture (MoA), Ministry of Fisheries and Water Resources and National Assembly Matters. This proposed project will coordinate with a range of ongoing initiatives in the Gambia related to climate change adaptation and rangeland management to ensure that best practices are incorporated. Several NGO projects are focusing on community level interventions. For example, Action Aid, is focusing especially on women development, child welfare, right to food, horticulture cooperation, seed and cereal banking. The mechanisms to engage community for effective local interventions are relevant to the proposed project. Coordination with the following projects will be established:

52. UNEP LDCF project, “**Strengthening climate services and early warning systems in the Gambia for climate resilient development and adaptation to climate change**” is the 2nd Phase of the GOTG/GEF/UNEP LDCF NAPA Early Warning Project. The project objective is to strengthen the climate monitoring capabilities, early warning systems and available information for responding to climate shocks and planning adaptation to climate change in Gambia. UNDP, LDCF project, “**Gambia - Enhancing Resilience of Vulnerable Coastal Areas and Communities to Climate Change in the Republic of Gambia**” focuses on reducing Gambia’s vulnerability to sea-level rise and associated impacts of climate change by improving coastal defenses and enhancing adaptive capacities of coastal communities.

53. **Climate for Development in Africa Programme (ClimDev-Africa)** is a joint initiative of the Commission of the African Union (AUC), the African Development Bank (AfDB) and the United Nations Economic Commission for Africa (UNECA). The the ClimDev-Africa programme supports Africa's response to climate variability and change by building regional, sub-regional and national policy capacity. It will improve the quality and availability of information and analysis to decision-makers.

54. The **West African Agriculture Productivity Programme** funded by World Bank and Spanish Government for 10 years (2011 – 2020) has some close linkage with the activities to be implemented by the National Agricultural Research Institute (NARI). The lessons learned and experiences under the component 3 on integrated agricultural development innovation platform, stakeholder validation and value chain analysis related activities can be integrated into the proposed project and thus a close coordination is expected. The platform approach is being implemented for peanut, maize and rice. The approach can be expanded to livestock and rangeland management under the proposed project.

55. National Agricultural Land and Water Management Development Project (NEMA) (2013 - 2019). The overall goal of the IFAD funded *Nema* project is to reduce the poverty of rural women and youth by increasing their incomes from improved productivity based on sustainable land and water management practices. This activities of the the project components (watershed development and agricultural commercialization) are related to component 3 and 4 of the proposed LDCF project. Exchange of ideas, avoiding duplication of efforts would be ensured by establishing close coordination mechanisms. The project will be implemented by the Ministry of Agriculture (MOA) which is also the main implementing partner of the proposed LDCF project.

B. DESCRIPTION OF THE CONSISTENCY OF THE PROJECT WITH:

B.1 National strategies and plans or reports and assessments under the relevant conventions, if applicable, i.e. NAPAS, NAPs, NBSAPs, national communications, TNAs, NCSAs, NIPs, PRSPs, Biennial Update Reports, etc.

56. The Department of State for Forestry and Environment with the support of the NAPA country team (NCT) has prepared the **National Adaptation Programme of Action (NAPA)**¹⁰ in November 2007. The NAPA has identified 10 priority projects to address issues such as: impairment of goods and services, amplification of adverse effects of climate change by human factors, food security and sustainable livelihoods, poverty reduction and equity, technology acquisition, innovation and diffusion and strategies for dealing with incremental effects of climate change. This proposed LDCF project address two major priority projects and needs identified under the National Adaptation Programme of Action (NAPA) (November 2007). The proposed project focuses on priority project 3: Diversification and intensification of agricultural production, processing and marketing; and priority project 8: Improved livestock and rangeland management for food security and environment sustainability.

57. The Gambia has prepared the **Second National Communications**¹¹ under the UNFCCC in 2012. This provides plausible climate change scenarios for assessment of the potential impacts of the projected climate change. The potential impacts of climate change on crop production, forestry, fisheries, and rangelands and livestock have been assessed in great detail. The document highlights adaptation and underlines the urgent need to strengthen institutional and technical base of the country to bring about effective implementation of adaptation policies and measures. Some of the priorities outlined in the document are identification and implementation of relevant adaptation measures and technologies in the areas of irrigation, crop selection, food processing and preservation. The adaptation technologies proposed include the adoption of deep-rooted, salt-tolerant tree/grass species and flood tolerant crop species and amendments to improve soil nutrient content and water holding capacity and tidal/flood irrigation.

58. The **government's vision for the agriculture sector** is to transform The Gambia into a major supplier of agricultural products to local and international markets between 2012 and 2015. To achieve this vision, the Government intends to pursue three courses of action: (i) increase food security and boost the income-generating capacity and the nutritional status of farmers, especially women and youth; (ii) transform the agricultural sector from a traditional subsistence economy to a modern market-oriented commercial sector; and (iii) increase and sustain agricultural production and productivity through year-round irrigation. The **Agriculture and Natural Resources (ANR) Policy (2009 – 2015)**¹² 's overall objective is to increase the agriculture sector's contribution to the national economy by increasing productivity through commercialization and greater private sector participation predicated on a sound macroeconomic framework aimed at enhanced growth and employment creation.

59. The ANR sector Policy is intended to improve and sustain measurable levels of food and nutrition security in the country in general and vulnerable populations in particular and has already been validated with the participation of sector stakeholders (farmers, farmers organizations, CBOs, NGOs, Development Partners and Public sector) now awaiting cabinet approval. The ANR policy has sharpened the focus on transformation of the sector from a traditionally low output, subsistence economy with centralized structure, to a modern,

¹⁰ Government of The Gambia (2007) Gambia National Adaptation Programme of Action (NAPA) on Climate Change, Banjul, November 2007.

¹¹ Government of The Gambia (2012). The Gambia's Second National Communication Under the United Nations Framework Convention on Climate Change (UNFCCC), Banjul, July 2012.

¹² The Republic of The Gambia (2009) Agriculture and Natural Resources (ANR) Policy (2009 – 2015).

market led sector with efficient value chains, diversified production base and effective decentralized structures. While the ANR policy is the overarching framework, sub-sectoral policies exist for fisheries (2012 – 2015), forestry (2009 – 2019), water resources (2009 – 2019). Complementary policies also exist for nutrition (2010 – 2020) and gender (2010 – 2020). The proposed project considers the complimentary with these policies.

60. Within the framework of the New Partnership for Africa (NEPAD), in 2003 the Comprehensive Africa Agriculture Development Programme (CAADP) was initiated soliciting each member country of the African Union (AU) to formulate a National Agricultural Investment Plan (NAIP) consistent with the Regional Agricultural Investment Plan (RAIP) to guide each country's pathway to agricultural and natural resource development. The Gambia National Agricultural Investment Plan (GNAIP)¹³ 2011 – 2015 is aligned fully with the national goals of Vision 2020, and aims to support the realization of main national strategic programmes, including the Poverty Reduction Strategy Paper II (PRSP II 2007-2011) and the Agriculture and Natural Resources (ANR) Sector Policy (2010). GNAIP comprises six programmes: (i) Improvement of Agricultural Land and Water Management; (ii) Improved Management of Other Shared Resources; (iii) Development of Agricultural Chains and Market Promotion; (iv) National Food and Nutrition Security; (v) Sustainable Farm Development; and (vi) GNAIP Coordination, Monitoring and Evaluation.

B.2 GEF focal area and/or LDCF/SCCF fund(s) strategies, eligibility criteria and priorities

61. The project will contribute to the implementation of the GEF LDCF. This project is consistent with LDCF results framework and will contribute to LDCF objective CCA-1 on reducing vulnerability to adverse impacts of climate change and objective CCA-2 on increasing adaptive capacity to respond to the impacts of climate change. The overall goal is to support the Gambia agriculture sector to become climate resilient by promoting urgent and immediate adaptation measures in development of policies, plans, programmes and actions.

62. The project complies with the NAPA-identified urgent needs and is relevant for supporting national development goals and for achieving MDGs. The project is designed to accommodate the additional adaptation costs of priority actions identified in the NAPA and build on other baseline projects described in section A.1. The proposed LDCF project address two major priority projects and needs identified NAPA, priority project 3: Diversification and intensification of agricultural production, processing and marketing; and priority project 8: Improved livestock and rangeland management for food security and environment sustainability. The Gambia's climate change integrated Programme for Accelerated Growth and Employment (PAGE) which is the replacement of the PRSP presents the five pillars (i) accelerating and sustaining economic growth, (ii) improving and modernising infrastructure, (iii) strengthening human capital stock and enhancing access to social services, (iv) improving governance and increasing economic competitiveness and (v) reinforcing social cohesion. The proposed project will contribute to pillars i) and iii).

63. The Ministry of Agriculture (MOA) has requested to adapt GEF agency (FAO) execution (letter dated 4 Mar 2014). The project will be implemented in close cooperation with the Ministry of Agriculture (MOA) in full collaboration with other relevant line Ministries and stakeholders. Sub national authorities (Regional and/or District officers, village, civil society and the private sector) will be important stakeholders. The implementation of the project's activities will reflect GEF monitoring and evaluation standards and procedures, in line with the requirements of the LDCF. The focus of the project is to promote adaptation measures at local level to reduce the risks to economic losses and to diversify livelihoods and their sources of income.

B.3 The GEF Agency's comparative advantage for implementing the project

64. The FAO Country Representation in the Gambia was established in 1978 to contribute in fulfillment of the stated mandate in collaboration with the Government and other relevant stakeholders. In the fulfillment of this mandate, FAO country Representation achievements in The Gambia have since 2005 have been evidenced by the 41 Technical Cooperation Projects (TCPs), 5 FAO Trust Fund projects, 5 OSRO funded Projects and Special Programme for Food Security (SPFS) and 22 Tele-food Mini Projects. These interventions have culminated in success stories comprising: enhanced institutional capacity for agriculture and natural resources management, enhanced production, processing and marketing capacity of

¹³ The Republic of The Gambia (2010) Gambia National Agricultural Investment Plan (GNAIP) (2011 – 2015).

producers/processors; formulation and coordination of Tele-food Mini Projects; implementation of the Special Programme for Food Security (SPFS); timely and appropriate emergency assistance to victims of natural disasters; supported sustainable and rational management of natural resources, increased stakeholder access to agricultural information and forged meaningful partnership and advocacy in the fight against hunger and malnutrition.

65. The Country Programme Framework (CPF: 2012 - 2015) is being prepared and will be implemented in partnership with stakeholders particularly the Ministries of Agriculture (MOA), Fisheries and water Resources (MOF & WR), Forestry and the Environment (MOFEN), multilateral and bilateral donors, UNDAF members, NGOs, farmer organizations and Civil Society Organizations (CSOs). The CPF has identified three priority areas for The Gambia: (i) Improved food and nutrition security, (ii) Agricultural productivity and commercialization, and (iii) Improved crop production and productivity. The proposed project is closely linked to the priorities of FAO's CPF in particular Outcome 3.2 on smallholder adaptation to climate change.

66. The proposed project matches with the FAO's comparative advantage in capacity development in agriculture and livestock sectors. FAO has been supporting the Gambia's efforts to develop more resilient agriculture systems and national food security strategies. Technical support will be provided locally from the national level expertise and also from the FAO Sub-Regional and Regional Offices in Accra, Ghana and from the climate impact and adaptation team of the Climate, Energy and Tenure Division (NRC) in FAO headquarters. The project is directly related to FAO's strategic objective "sustainable management of land, water and genetic resources and improved response to global environmental challenges affecting food and agriculture" and organizational result "countries have strengthened capacities to address emerging environmental challenges such as climate change and bio-energy". The project integrates FAO's core functions encompassing elements such as monitoring, assessments, knowledge and information, policy advice, capacity building, communication, interdisciplinary approach and partnerships.

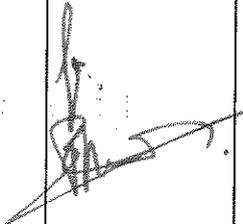
67. From the FAO perspective, food security is considered as a necessary pillar of climate change adaptation. FAO is best placed to provide the relevant multidisciplinary approach and divergent technical guidance necessary to analyze different vulnerable food systems to impacts of climate variability and change that enables designing adaptation practices. FAO is able to provide normative and field level support to this project through technical staff in headquarters and decentralized offices. The project fits into FAO-Adapt, an organization-wide framework programme launched in 2011. FAO-Adapt provide an umbrella to FAO's adaptation activities, including short-term and long-term adaptation measures.

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

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

NAME	POSITION	MINISTRY	DATE (MM/DD/YYYY)
Ndey Sireng Bakurin	Executive director & GEF Focal Point for The Gambia	National environment agency, Gambia Jimpex Road P.O.Box 48, Banjul The Gambia	MARCH 3, 2014

B. GEF AGENCY(IES) CERTIFICATION

This request has been prepared in accordance with GEF/LDCF/SCCF/NPIF policies and procedures and meets the GEF/LDCF/SCCF/NPIF criteria for project identification and preparation.					
Agency Coordinator, Agency name	Signature	Date (MM/DD/Y YYY)	Project Contact Person	Telephone	Email Address
Gustavo Merino Director and GEF Coordinator Investment Centre Division Technical Cooperation Department FAO Viale delle Terme di Caracalla (00153) Rome, Italy TCI-Director@fao.org		April 22, 2014	Selvaraju Ramasamy Climate Impact, Adaptation and Environment Unit, Climate, Energy and Tenure Division (NRC), FAO, Rome	+3906 57056832	Selvaraju.Ramasamy@fao.org
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