



GLOBAL ENVIRONMENT FACILITY  
INVESTING IN OUR PLANET

Naoko Ishii  
CEO and Chairperson

November 18, 2014

Dear LDCF/SCCF Council Member:

UNDP as the Implementing Agency for the project entitled: ***Somalia: Enhancing Climate Resilience of the Vulnerable Communities and Ecosystems in Somalia***, has submitted the attached proposed project document for CEO endorsement prior to final approval of the project document in accordance with UNDP procedures.

The Secretariat has reviewed the project document. It is consistent with the proposal approved by LDCF/SCCF Council in January 2014 and the proposed project remains consistent with the Instrument and LDCF/SCCF policies and procedures. The attached explanation prepared by UNDP satisfactorily details how Council's comments have been addressed. I am, therefore, endorsing the project document.

We have today posted the proposed project document on the GEF website at [www.TheGEF.org](http://www.TheGEF.org). If you do not have access to the Web, you may request the local field office of UNDP or the World Bank to download the document for you. Alternatively, you may request a copy of the document from the Secretariat. If you make such a request, please confirm for us your current mailing address.

Sincerely,

for

Naoko Ishii  
Chief Executive Officer and Chairperson

Attachment: GEFSEC Project Review Document  
Copy to: Country Operational Focal Point, GEF Agencies, STAP, Trustee



# REQUEST FOR CEO ENDORSEMENT

PROJECT TYPE: FULL-SIZED PROJECT

TYPE OF TRUST FUND: LDCF

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## PART I: PROJECT INFORMATION

Project Title: <u>Enhancing Climate Resilience of the Vulnerable Communities and Ecosystems in Somalia</u>			
Country(ies):	<u>Somalia</u>	GEF Project ID: <sup>1</sup>	<u>5592</u>
GEF Agency(ies):	<u>UNDP</u>	GEF Agency Project ID:	<u>5268</u>
Other Executing Partner(s):	<u>Ministry of Petroleum, Minerals and the Environment</u>	Submission Date:	<u>September 2014</u>
		Resubmission Date:	<u>Oct 27, 2014</u>
GEF Focal Area (s):	<u>Climate Change</u>	Project Duration(Months)	<u>48</u>
Name of Parent Program (if applicable):	<u>n/a</u>	Agency Fee (\$):	<u>760,000</u>
➤ For SFM/REDD+ <input type="checkbox"/>			
➤ For SGP <input type="checkbox"/>			

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

Focal Area Objectives	Expected FA Outcomes	Expected FA Outputs	Trust Fund	Grant Amount (\$)	Co-financing (\$)
CCA-1	<b>Outcome 1.1</b> Mainstreamed adaptation in broader development frameworks at country level and in targeted vulnerable areas	<b>Output 1.1.1:</b> Adaptation measures and necessary budget allocations included in relevant frameworks	LDCF	<u>764,500</u>	<u>6,194,400</u>
	<b>Outcome 1.2</b> Reduced vulnerability in development sectors	<b>Output 1.2.1:</b> Vulnerable physical, natural and social assets strengthened in response to climate change impacts, including variability		<u>3,687,000</u>	<u>29,873,900</u>
	<b>Outcome 1.3</b> Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas	<b>Output 1.3.1:</b> Targeted individual and community livelihood strategies strengthened in relation to climate change impacts, including variability		<u>503,000</u>	<u>4,075,600</u>
CCA-2	<b>Outcome 2.2</b> Strengthened adaptive capacity to reduce risks to climate-induced economic losses	<b>Output 2.2.1</b> Adaptive capacity of national and regional centers and networks strengthened to rapidly respond to extreme weather events	LDCF	<u>1,439,500</u>	<u>11,663,500</u>
	<b>Outcome 2.3</b> Strengthened awareness and ownership of adaptation and climate risk reduction processes at local level	<b>Output 2.3.1</b> Targeted population groups participating in adaptation and risk reduction awareness activities		<u>503,000</u>	<u>4,075,600</u>

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

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

CCA-3	<b>Outcome 3.2</b> Enhanced enabling environment to support adaptation-related technology transfer	<b>Output 3.2.1</b> Skills increased for relevant individuals in transfer of adaptation technology	LDCF	733,000	5,939,000
<b>Project Management Cost</b>			LDCF	370,000	2,998,000
<b>Total project costs</b>				<b>8,000,000</b>	<b>64,820,000</b>

## B. PROJECT FRAMEWORK

**Project Objective:** Enhanced resilience and improved adaptive capacity of vulnerable Somali communities in pilot areas, and the ecosystems on which they depend, to the adverse impacts of climate change

Project Component	Grant type	Expected Outcomes	Expected Outputs	Trust Fund	Indicative Grant Amount (\$)	Indicative co-financing (\$)
1. Enhancing Policies, Institutional Frameworks and Government Capacities	TA	1. Policies, plans and tools reviewed, revised, developed, adopted and implemented by government to mainstream and enhance adaptive capacity and mitigate the risks of climate change on vulnerable communities and critical ecosystem services	<p>1.1 Increased knowledge of national and sub-national institutions in integrated land and water management principles under conditions of climate change and in the ecosystem based approaches to climate adaptation (TA: USD 649,000)</p> <p>1.2 Government Departments complete sectoral analyses of climate risks, vulnerability and gender dimensions of climate change to facilitate mobilization of long-term financing for Climate Change Adaptation (TA: USD 150,000)</p> <p>1.3 Government officials review, revise or draft new policies, regulations and frameworks for the protection, conservation and management of land and water ecosystems under conditions of climate change (TA: 614,500)</p> <p>1.4 National and regional Disaster Risk Management institutions are reinforced to produce early warning products and to disseminate early warnings (TA: 606,500)</p>	LDCF	2,020,000	16,367,000

2. Piloting Ecosystem Based Adaptation strategies	INV/ TA	2. Models of community and ecosystem resilience developed and implemented in pilot areas selected in consultation with government and community stakeholders	<p>2.1 Ecosystem-based Adaptation (EbA) plans, Natural Resource Management (NRM) strategies and Integrated Water Management options for critical watersheds, rangelands, agricultural lands and forested areas are developed and piloted jointly by local governments and vulnerable communities at each location ( INV/TA: USD 1,509,000)</p> <p>2.2 District Disaster Management Committees are established and Disaster Risk Reduction plans are generated to address community vulnerabilities to climatic change and to facilitate response and preparedness plans to reduce identified risk (TA: USD 184,000)</p> <p>2.3 Suite of physical techniques and adaptation measures including investment in medium and large-scale water infrastructure, reforestation, flood-control infrastructure, and watershed management developed to improve ecosystem resilience of critical watersheds, rangelands and forested areas through government support (INV: USD 3,687,000)</p> <p>2.4 Support for women’s livelihood diversification with the introduction adaptation technologies aimed to reduce dependence on dwindling natural resources (INV/TA: USD 230,000)</p>	LDCF	5,610,000	45,455,000
Sub-total				7,630,000	61,822,000	
Project management cost (PMC)				370,000	2,998,000	
<b>Total project costs</b>				<b>8,000,000</b>	<b>64,820,000</b>	

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

Please include letters confirming co financing for the project with this form

Sources of Co-financing	Name of Co-financier (source)	Type of Co-financing	Co-financing Amount (\$)
National Government	Ministry of Petroleum, Minerals and Environment, Government of Somalia	In-kind	8,000,000
GEF Agency	UN's Joint Programme for Sustainable Charcoal Production and Alternative Livelihoods (PROSCAL)	Grant	12,320,000
GEF Agency	UNDP TRAC funding for Poverty Reduction and Environment Protection Programme (PREP)	Grant	1,500,000
GEF Agency	Poverty Reduction and Environment Protection Programme (PREP)	Grant	9,000,000
Bilateral Aid Agency	EU's MDG initiative for Somalia - Reducing hunger and food insecurity in Puntland region through improved and sustainable use of rangeland resources	Grant	34,000,000
<b>Total Co-financing</b>			<b>64,820,000</b>

**D. TRUST FUND RESOURCES REQUESTED BY AGENCY, FOCAL AREA AND COUNTRY<sup>1</sup>**

GEF AGENCY	TYPE OF TRUST FUND	FOCAL AREA	Country name/Global	Project amount (a)	Agency Fee (b)	Total c=a+b
UNDP	LDCF	Climate change adaptation	Somalia	8,000,000	760,000	8,760,000
<b>Total GEF Resources</b>				<b>8,000,000</b>	<b>760,000</b>	<b>8,760,000</b>

<sup>1</sup> 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.

<sup>2</sup> Indicate fees related to this project.

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

Component	Grant Amount (\$)	Cofinancing (\$)	Project Total (\$)
International Consultants	391,000	0	391,000
National/Local Consultants	1,212,000	0	1,212,000

**F. DOES THE PROJECT INCLUDE A "NON-GRANT" INSTRUMENT? NO**

(If non-grant instruments are used, provide in Annex D an indicative calendar of expected reflows to your Agency and to the GEF/LDCF/SCCF/NPIF Trust Fund).

## **PART II: PROJECT JUSTIFICATION**

### **A. DESCRIBE ANY CHANGES IN ALIGNMENT WITH THE PROJECT DESIGN OF THE ORIGINAL PIF<sup>3</sup>**

1. No significant changes have been made to the original PIF. All outputs have been detailed and contextualized, and some outputs have been restructured/re-worded to emphasise the needs highlighted during the project preparation phase, as noted during workshops and bilateral/multilateral consultations.

2. Specific updates to the outputs include the following:

3. In Component 1, the sectoral analyses to be conducted in Output 1.2 will now also consider the gender aspects of climate change. Output 1.2 also focuses more on mobilizing long-term financing for Climate Change Adaptation to ensure project intervention sustainability. Due to the somehow unrealistically large scope of Output 1.3 in the PIF, the proposed project will focus on surface water, groundwater and terrestrial ecosystems specifically; marine ecosystems will be excluded because Stakeholders indicated that needs along the coast are not as great and that they have been supported through previous projects such as the World Bank's Tsunami Livelihoods Recovery Project after the natural disaster occurred.

4. Overall, the biggest change in Component 1 was to modify Output 1.4 not only to create/update Disaster Risk Reduction (DRR) policies to consider climate change, but also to support the relevant DRR ministries to have the capacities to disseminate early warnings. Stakeholder consultations during project preparation indicated that Disaster Risk Management agencies in all three zones suffer from serious capacity gaps including inadequate qualified staff; inadequate staff recruitment; low level of staff skills and knowledge on disaster management; limited access to information due to inadequate skills on Information Communication Technology (ICT); and lack of capacity building for Disaster Preparedness. Moreover, since the civil war erupted in 1991, Somalia has lost almost all of its climate and weather monitoring systems through vandalism and lack of maintenance. This was then followed by many years of missing data due to lack of DRM/DRR agencies. Consequently, new Climate Monitoring / Early Warning System entities will be created in Puntland and Somaliland while the existing Somali Disaster Management Authority in South Central (functioning only for one year) will be reinforced.

5. In Component 2, Output 2.1 also includes the development of Natural Resource Management and Integrated Water Management options and strategies. Output 2.3 is the former Output 2.2 from the PIF and the new Output 2.2 is a contextualized version of Output 2.3 identified in the PIF. The revised Output 2.2 reinforces both district and community capacities on Disaster Risk Management. Community-based DRM plans will be generated with the support of newly created District Disaster Management Committees to reduce identified risks associated with flooding and droughts.

6. Finally, an additional output focusing on strengthening women's livelihoods was deemed required by Stakeholders under Component 2. By having a separate Output (2.4) to emphasize gender, funds will be secured to support women to have diversified livelihoods. Women-based groups will be trained on adaptation technologies and supported to market the technologies to the rural populations. By providing women-based groups with business opportunities, this will increase women's asset bases and effectively, their resilience to climate change.

#### **A.1 National strategies and plans or reports and assessments under relevant conventions, if applicable, i.e. ] NBSAPs, national communications, TNAs, NCSA, NIPs, PRSPs, NPFE, Biennial Update Reports, etc.**

7. The proposed project relates to and will contribute towards Somalia's National Adaptation Plan (NAP) process by implementing activities in line with the recommendations of NAP. The proposed project is focused on building

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<sup>3</sup> For questions A.1 –A.7 in Part II, if there are no changes since PIF and if not specifically requested in the review sheet at PIF stage, then no need to respond, please enter "NA" after the respective question

resilience by addressing policy and institutional issues as well as building capacities for local actions. Specifically, the project will have a strong synergy with the NAP process for desertification. Somalia is part of a regional project supporting 20 GEF Eligible Parties to align their National Action Programs and Reporting Processes with the UNCCD (UNEP). The regional project goal is to contribute to better targeted investments in Desertification Land Degradation and Drought (DLDD). The LDCF1 project will complement the NAP process by taking concrete actions (such as reforestation) to combat land degradation. Also, the development of Land Use Policies will create a legal framework to support sustainable land management practices. Furthermore, the LDCF1 project will contribute data (such as baseline DLDD information) into any NAP monitoring and assessment systems and any future dryland strategies.

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

8. The proposed project has been prepared fully in line with guidance provided by GEF and the LDCF Trust Fund. The project follows the guidance from the ‘Programming Paper for Funding the Implementation of NAPAs under the LDC Trust Fund’ (GEF/LDCF 2006). The project focus is also aligned with the scope of expected interventions as articulated in the LDCF programming paper and decision 5/CP.9. As climate impacts fall disproportionately on the poor, the project recognizes the links between adaptation and poverty reduction (GEF/C.28/18, 1(b), 29). The project has been endorsed by the national UNFCCC and GEF focal points in Somalia.

9. Component 1 of the project is in line with LDCF/SCCF Focal Area Objective 1 by reducing the vulnerability of communities to the adverse impact of Climate Change. Component 2 of this project support LDCF/SCCF Area Objective 3 by promoting the transfer and adoption of adaptation technologies. The technologies to be adopted in this project include adaptation technologies/packages to increase the productivity of farmers and pastoralists (Component 2).

10. Component 2 of this project supports LDCF/SCCF Area Objective 2 by increasing the adaptive capacity to respond to the impacts of climate change, including variability, at local and regional levels.

11. Moreover, Outcomes 1 and 2 of this project are aligned with the GEF/LDCF Portfolio Level Outcome/Output, “Capacity development at the local level to implement climate-related disaster prevention measures.”

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

12. UNDP has a strong comparative advantage to implement this project, both corporately, based on its extensive experience and knowledge in the field of climate change adaptation and development, and locally on the ground based on its ongoing activities in the country. UNDP is one of the most active agencies supporting the Somali government in the area of climate change, having supported its first climate-related planning exercise vis-à-vis the development of the NAPA.

13. Since the collapse of the State institutions in 1991, UNDP together with around 23 other UN agencies in Somalia, has been helping Somalis recover from years of conflict and set Somalia on the path to development. It supports Somalis to build peace, reconstruct their infrastructure and rebuild institutions. In all its activities, UNDP encourages the protection of human rights and the empowerment of women. UNDP is an important and active member of the United Nations County Team in Somalia.

14. Given the long-standing commitment and experience in Somalia, UNDP has been able to develop partnerships with governments, local institutions and communities. This strong network places UNDP in an excellent position to lead this LDCF-funded project. It has been implementing projects under four programmatic areas, which include:

15. Through its Poverty Reduction and Environment Programme (PREP), UNDP has increased livelihood opportunities and improved natural resource management in vulnerable communities across Somalia. Under PREP, the UNDP has recently launched the UN Joint Programme for Sustainable Charcoal Production and Alternative Livelihoods, which is expected to make significant contributions to increasing the resilience of communities in Somalia.

16. As a trusted development partner and co-sponsor of UNAIDS, UNDP’s main focus is to build national capacities of government at all levels and work closely with civil society to support a coordinated and effective response to the HIV & AIDS epidemic.

17. UNDP's Rule of Law and Security Programme works towards improved security and protection under the law for all Somalis. As such, it seeks to advance human development by strengthening national and local capacities to prevent, mitigate and cope with the impact of violence.

18. UNDP is expanding its work to promote gender equality and women's empowerment by providing strategic support to relevant Somali stakeholders. It aims to empower Somali women to be able to determine and lead their own agendas, as well as inspire others, and holds leadership training and provides mentoring services to women active in government, civil society and the private sector. Meanwhile, through a wider engagement with young people, communities, and institutions, UNDP boosts efforts to promote gender equality and women's rights.

19. With the recent positive developments in Somalia and greater stability, UNDP has taken swift actions to relocate its office for Somalia from Nairobi to Mogadishu and intends to continue with a strong presence in the capital. Due to more peaceful conditions in Puntland and Somaliland, the UNDP offices are well established in the capitals of both regions respectively.

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

20. To escape the current trend into extreme poverty, Somalia's farmers and pastoralists urgently require resiliency to the impacts of extreme weather and climate change, as well as the means and know-how to more sustainably manage their limited natural resources. Currently, the concentration of population and economic activity is located in flood-prone areas and in conflict-ridden areas, in which climate-induced resource scarcity could escalate violence and political instability. Much of the country in the North is arid and semi-desert making it relatively unproductive for agriculture, with nomadic pastoralism the only potential livelihood option.

21. To support sustainable land management and preparedness for natural risks, climate risk management must be institutionalized from national down to local levels in Somalia. At the national level, the environment, water, agriculture and livestock ministries require significant technical and operational capacity reinforcement to support their mandates. After 20 years of civil strife, ministries and institutions are weak and there is little environmental coordination at a policy or regulatory level.

22. From a programme perspective there is currently no knowledge or practical experience on planning and implementing climate resilient development. Existing plans and strategies do not consider the risks associated with climate change, and there are no modalities to facilitate such transformational change in development planning. The broad absence of (or very weak) governance structures, particularly on decentralized levels, has allowed civil society to take on many roles of the government, particularly in Federal Somalia, generally in an ad-hoc and uncoordinated manner.

23. From a policy perspective, there are no legal means to promote and enforce sustainable natural resource practices. There are different environment related policies in place (e.g., the National Policy on Environment in Somaliland and a Disaster Risk Reduction Framework in Puntland). Despite their operationalization, the policies have remained largely inadequate in establishing an enabling environment for institutional capacity development, which would promote sustainable natural resource management, disaster preparedness and simultaneously entrench poverty reduction programming.<sup>4</sup> Ministries simply do not have the capacity to formulate appropriate, relevant policies. For instance, there are currently no policies for sustainable forest management, watershed management and land-use management.

24. Inappropriate or absent regulation is reflected in the unsustainable Natural Resources Management (NRM) and rangelands that threaten the livestock trade. In fact, land issues and conflicts between farmers and pastoralists are common due to the lack of policies on land tenure and water rights.<sup>4</sup> Most critically, in the absence of effective strategies to link NRM with livelihood generation and job creation, Somalia's interlinked crises of unemployed youth, forced displacement, contested land, drought and natural resource depletion presents a risk to Somalia's peaceful development.<sup>4</sup>

25. Exacerbating the lack of governance are severe constraints in financial resources, which can support qualified technical personnel. Trained technical personnel often leave ministries to join international NGOs or leave Somalia for

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<sup>4</sup> African Research Initiative for Somalia 2013, Country Report on the Millennium Development Goals (MDG Report)  
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more lucrative positions abroad.<sup>5</sup> Consequently, the government lacks technical capacities to manage water resources effectively; e.g. hydrologists and meteorologists. Lack of borehole maintenance and inappropriate borehole design has resulted in low water tables and poor groundwater quality.<sup>4</sup>

26. The lack of manpower to support environmental management conflicts with the fact that, at present, Somalia has 73 percent of its population below the age of 30, the highest in the country's history. Youth often have a stronger awareness of environmental issues and a greater stake in long-term sustainability, particularly as agents of change.<sup>6</sup> Nevertheless, there is no long-term strategy to train the youth to be the next workforce to improve natural resource management. Consequently, many young people are trapped in an environment of violence, fear, unemployment and poverty. Experiences from Somalia and elsewhere show that when large numbers of young people are jobless and have few opportunities for positive engagement, they become a ready pool of recruits for extremists (e.g., al Shabaab).

27. Similar to the limited budget for technical personnel, the proportion of budget allocated to conservation expenditure and adaptation actions is also negligible. Most government budget lines are used to support short-term priorities such as drilling boreholes when shallow wells (berkads) become dry. Consequently, farmer and pastoralist communities in the regions of highest rainfall variability largely depend on humanitarian aid to buffer risks during drought periods (such as during the drought of 2011).

28. On the local level, proactive, community-based natural resource management and disaster preparedness is limited. Communities lack knowledge of effective rainwater harvesting techniques and are unable to efficiently capture and store runoff during heavy rains for use during the dry season.<sup>7</sup> A small number of villages capture and store rainwater, but this is not done systematically. Water sources and reservoirs have also deteriorated from silting due to weak community and government level management. Furthermore, rural communities are also unable to practice sustainable rangeland/pasture management, so as to ensure sufficient food and fodder supplies during periods of drought.

29. Marginalization of the women and youth is furthermore exacerbating the potential to use natural resources sustainably in Somalia. Women in rural areas are identified as one of the most vulnerable groups in Somalia. Within the female headed household, women are obliged to grow food, to gather fuel and water, to cook, and to rear children.<sup>8</sup> The sexual division of labour, unequal access to both material and non-material resources and women's diminished participation in decision-making in both political and private domains generally result in increased vulnerability of women to the impacts of climate change. In Somalia, women are found to be responsible for finding solutions to feed their families during crisis situations. Gender inequality is alarmingly high at 0.776 out of a value of 1 (complete inequality), with Somalia at the fourth lowest position globally on the Gender Inequality Index (GII), if internationally comparable data were available.<sup>9</sup>

30. Exacerbating the adverse impacts of unsustainable land and water management on communities and women, is the fact that the government lacks hydro-meteorological infrastructure to monitor and assess the weather, the climate and water levels, so as to forewarn Somalis of impending natural disasters. The situation is dire for Federal Somalia, because no hydro-meteorological stations exist to assist in generating weather warnings. Consequently, limited drought and flood warnings are communicated to rural populations.

31. It is predicted that extreme weather risks are expected to increase in Somalia. Climate change prediction analyses have been derived from the FAO Somalia Water and Land Information Monitoring (SWALIM, 2002-2012) programme database, the NAPA (through the support of the IGAD Climate Predictions and Assessments Centre, ICPAC) as well as from neighbouring countries in the Greater Horn of Africa (GHA) region. Based on the IPCC Global Climate Models (GCMs) and the new generation of the Earth System Models (ESMs) from the Fifth Phase of Coupled Model Inter-comparison Project (CMIP5) and Regional Climate Models (RCMs), the most recent global projections

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<sup>5</sup> Somalia Ministry of National Resources 2013. National Adaptation Programme of Action on Climate Change for Somalia (NAPA 2013)

<sup>6</sup> UNDP 2012. Somalia Human Development Report 2012: Empowering Youth for Peace and Development

<sup>7</sup> Somalia Ministry of National Resources 2013. National Adaptation Programme of Action on Climate Change for Somalia (NAPA 2013)

<sup>8</sup> African Research Initiative for Somalia 2013, Country Report on the Millennium Development Goals (MDG Report)

<sup>9</sup> UNDP 2012. Somalia Human Development Report 2012: Empowering Youth for Peace and Development

show that Somalia is expected to experience a steady future increase in temperature, rising to 3.2 °C by 2080.<sup>10</sup> A gradual increase in total rainfall is expected in Somalia with increasing seasonal variability, as well as an increase in the frequency and severity of future droughts and flash flood events.<sup>10</sup>

32. Without any intervention, management and planning to address the aforementioned problems related to land/water use management and flood/drought preparedness, particularly for the long-term, will become more challenging. Climate change will invariably act like a threat multiplier that will most severely impact the rural populations dependent on climate-sensitive agriculture and pastoralism in Somalia. With a population growth rate of at least 2.3%,<sup>11</sup> vulnerabilities will only be exacerbated by the rural populations' pre-existing problems such as conflict, poverty and unequal access to scarce resources.

33. The institutional, financial, technological and informational barriers in Somalia include the following:

- Political disintegration/lack of coordination;
- Absence of, and lack of, coordination and decentralization among natural resource policies;
- Limited technical and operational capacities to support adaptation on national levels;
- Limited knowledge and capacity to respond to climate change on national and local levels;
- Unsustainable water and natural resource management practices;
- Limited climate monitoring and weak disaster risk preparedness capacities;
- Limited national financing and ad hoc, uncoordinated donor responses for long-term climate change adaptation measures; and
- Limited socio-economic development and diversification of livelihoods to build resilience to climate change for women.

34. Other baseline projects have tried to address these barriers and problems. LDCF1<sup>12</sup> funds will complement other on-going and planned adaptation-related projects listed below. Details on how LDCF funds will be used to build off and complement the baseline projects are included in the boxed text below the project descriptions.

35. ***The New Deal Compact*** (*Government co-financing through Federal and Regional Level Plans - USD 8,000,000*): On the 30th of November 2011, at the 4th High Level Forum on Aid Effectiveness, the New Deal for Engagement in Fragile States ("The New Deal") developed through the forum of the International Dialogue for Peace-building and State-building was presented and widely endorsed. While bilateral and multilateral agencies in Somalia have been providing humanitarian support, the New Deal calls for a shift, and for support to be provided by international organizations for long-term development needs. During the consultative process leading to the Compact, the FGS and development partners made specific reference to the lack of environmental protection and lack of coping capacities to respond to climate change, and how these constrain and negatively impact the development of the primary production sectors, namely agriculture, livestock, fisheries and infrastructure.

36. The LDCF-funded project will ensure that projects are in-line with the key objectives of the New Deal and other relevant zonal plans. For example, stemming from the New Deal, the Somaliland government developed a ***National Development Plan (NDP)*** for 2012-2016, for which it employs its own funds and seek development assistance from donors for implementation. The plan includes sectors, namely, environment, rural development, agriculture, livestock and disasters management, that are directly linked to the LDCF1 project. The NDP allocates USD 36.92m for the Environment and Rural Development sector and USD 5.92m for Disaster Preparedness and Management. Similarly, Puntland has completed its 5-year Development Plan and Federal Somalia is in the process of preparing a national development budget.

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<sup>10</sup> Somalia Ministry of National Resources 2013. National Adaptation Programme of Action on Climate Change for Somalia (NAPA 2013)

<sup>11</sup> Verner, Dorte, 2012. *Adaptation to a Changing Climate in the Arab Countries*, MENA Development Report, The World Bank

<sup>12</sup> As this is Somalia's first LDCF-financed project, it will be simply referred to as the LDCF1 project.

37. LDCF1 project outputs will directly support the goals stated in the zonal development plans and will have specific activities aligned with the federal-level plan. Most notably, the infrastructure and grazing restoration activities identified during project development were prioritized by the Ministry of Environment, and will address part of the unfunded required actions by the NDP.

LDCF funds will be used to enhance the New Deal initiatives and zonal development plans by developing policies for sustainable land-use and reinforcing the appropriate institutions to enforce environmental protection. The proposed project will also support Somalia's core productive livelihoods, agriculture and pastoralism by providing farmers and pastoralists capacity reinforcement on best practices for sustainable Natural Resource Management.

38. **UN Joint Programme for Sustainable Charcoal Production and Alternative Livelihoods (PROSCAL)** (2013-2015, co-financing USD 12,320,000): The UN Joint Charcoal Reduction Programme (CRP) is in response to the UN Security Council resolution 2036 (2012) that seeks international cooperation to ban illegal exports of charcoal from Somalia. The successful implementation of the Joint Programme will contribute towards the protection of Somali natural resources endowments, which is critical to ensure the livelihoods of the large pastoral/agro-pastoral Somali population. The specific objectives of the programme are: 1) Support Somalia, as well as countries in the Horn of Africa and the region, to produce pertinent legal instruments and strengthen enforcement mechanisms at national, regional and local levels; 2) Promote alternative sources of energy to reduce local charcoal consumption; and, 3) Provide alternative livelihoods to the Charcoal Value Chain Beneficiaries (CVCBs) involved in the charcoal production and trade.

LDCF funds will be used to provide alternate livelihoods such as by empowering women to sell adaptation technologies (e.g., rainwater harvesting equipment). Also, the land use policies to be developed in each zone and reforestation activities will restore ecosystem services required to improve present agro-pastoral livelihoods.

39. **UNDP Poverty Reduction and Environment Protection (PREP) Programme** (2013-2015, co-financing USD 1,500,000 from UNDP Trac funding and USD 9,000,000 from the PREP programme budget): UNDP-Somalia Poverty Reduction and Environment Protection Programme (PREP) supports vulnerable communities by providing pro-poor social services towards achieving the MDGs and by creating an enabling environment for reconstruction and development. It strives to increase local community's income, improve their ability to manage natural resources, and prevent or mitigate the impact of disasters, both natural and man-made. The programme specifically focuses on community support, with a broad range of partners at the community level and in the private sector.

40. The goal of local economic development in PREP is primarily achieved by investing in the productive infrastructure (e.g. feeder roads, markets, irrigation systems, agricultural land reclamation, slaughter houses, fishery facilities and water catchments for livestock use), and social infrastructure and community facilities (e.g. water networks, waste water treatment plants as well as health and education facilities). The geographical focus of these fast-track early recovery schemes is in areas where there is high probability of achieving peace and stability, and / or generates significant short-term employment opportunities. LED projects have included the installation of gabion, water diversion infrastructure and earth dam construction.

With the support of the LDCF, efforts will be made to construct and rehabilitate water mobilization infrastructure (e.g. replacing open water irrigation canals with piping systems) and making ecosystems more climate resilient (e.g., through water diversion and gabion construction). Such activities will significantly reduce downstream maintenance costs and offer more sustainable solutions to cope with extreme climatic events in Somalia. Also, the proposed project will develop policies and reinforce institutional capacities to enforce NRM. Simultaneously, the proposed project will build off the water mobilization and diversion designs and techniques tested in the Local Economic Development projects under PREP. It will take lessons learned as to how to engage NGOs and CBOs in project implementation and then upscale interventions with the revitalization of CBOs in the target areas.

41. **MDG initiative for Somalia- Reducing hunger and food insecurity in Puntland region through improved and sustainable use of rangeland resources** (2013-2019, USD 34,000,000). The EU's **SHARE Initiative - Support to Horn of Africa Resilience** includes two baseline projects: 1) the MDG initiative and 2) the Economic Development

Programme for Growth and Resilience (see Section 2.3.2). The *MDG initiative* targets Puntland due to the recurrent drought and land degradation in Puntland, the fact that there are fewer initiatives to improve food security in Puntland relative to Somaliland and that environmental degradation in Puntland has reached levels of very serious concern among the international community, Puntland stakeholders and the regional Government. Through the MDG initiative the EU aims to help plan, implement and monitor the programme by using local authorities and communities and by building their capacities in a sustainable way. The MDG initiative aims to combat rangeland degradation by improving the sustainable use of rangeland resources and bringing over 1.5 million pastoralists, agro-pastoralists and other vulnerable rural people earning less than a dollar/day, above the poverty line (thereby contributing to improving Millennium Development Goals (MDG) 1 (food security and water infrastructure development) and MDG 7 (managing rangelands). Moreover, restored rangelands are planned to provide full and productive employment to rural populations through revived rangeland-based livelihoods and Cash for Work<sup>13</sup> opportunities. Furthermore, the initiative is making local development have greater impact by harmonizing traditional rules (Xeer) with the government objective to promote conservation of the environment. The MDG initiative is facilitating the adoption of community plans at local level and supporting the interaction among communities toward the management of conflicts based on disputed natural resources.

42. In the MDG initiative, a new set of economic activities will stand on the side of traditional ones. These activities – in both environmental protection and rangeland monitoring - will strengthen the local management of rangelands, will provide vocational training and will increase the number of people that will have decent, socially recognized work. It will also focus on Integrated Water Resource Management (IWRM). In order to establish appropriate Monitoring and Evaluation, the communities will first assess the natural resources that are available in their area of influence. Next, communities will prepare a plan for the general management and conservation of the natural resources. Each plan will be budgeted and the community will contribute to the budget. A committee formed within the community supervised by the project will implement the plan.

43. Specifically, the MDG initiative has similar objectives as the LDCF1 project in the Puntland area and will provide full support in the following aspects:

- Combating rangeland degradation and improving the sustainable use of rangeland resources;
- Providing employment to rural populations by i) reviving rangeland-based livelihoods, ii) creating jobs linked to environmental monitoring and protection and iii) providing Cash for Work opportunities;
- Empowering communities to manage small funds for projects to mitigate drought or to improve their livelihood with a Community Driven Development (CDD) scheme; and
- Strengthening institutional, policy and legal frameworks for rangeland protection.

44. The MDG Initiative Result (bullet point 4 above) includes strengthening institutions and policy frameworks. Specifically, the Initiative includes the development of an overall Rangeland Policy based on updating enacting and implementing existing relevant policies. For instance, a law that rescues traditional values and codes with regards to rangeland management is planned to be developed, discussed with civil society and approved by the Parliament. As a baseline project providing cofinancing for the LDCF1 project, lessons learned from the MDG initiative will support successful development of a National Climate Change Policy.

As the MDG is only concerned with Puntland, lessons learned and successful on-the-ground activities from the MDG initiative will be expanded in the proposed project in Somaliland and South Central. Concepts to be upscale include using policy development, Cash for Work, restoring rangelands and building on the natural resource dispute resolution process at the local level. In return, the adaptation alternative provided by the proposed project will create and enforce land use policies which will be directly relevant to all rangeland activities by the MDG. It will also create an over-arching National Climate Change Policy to guide adaptation activities and mobilize funds for future adaptation measures (based on lessons learned from the Rangeland policy to be developed by the MDG initiative). LDCF funds will also support ministries, institutions, CBOs and communities by increasing their awareness on climate change adaptation and disaster preparedness.

<sup>13</sup> "Cash-for-work" is a short-term intervention to provide temporary employment in public projects - such as repairing roads, clearing debris or re-building infrastructure - to the most vulnerable segments of a population.

45. The following two projects/programmes by AfDB and FAO are considered baseline but will not be providing cofinancing. The AfDB DRSLP programme is still under development, so it cannot provide co-financing at this stage. Similarly, rather than provide cofinancing, FAO will sign an inter-agency agreement with UNDP so that their extensive expertise can be used to support activity implementation. It is planned that FAO will provide direct support by assisting with Agro-Pastoral Field School development.

46. The *Drought Resilience and Sustainable Livelihoods Programme in the Horn of Africa (DRSLP)*, African Development Bank (46.5m USD, 2013-2017, AfDB, including external resources from SDC Swiss and a pending GEF – LDCF initiative). The *DRSLP* is aimed at building resilience and sustainable livelihoods for pastoral and agro-pastoral communities in drought-prone areas in all zones of Somalia (Somaliland, Puntland and South Central). The *DRSLP* programme will be focusing on Somalia and Chad, and will be implemented by the Ministry of Environment in Puntland. The *DRSLP* plans and target areas have not yet been finalized. The programme foresees the following general objectives:

- Providing water mobilisation schemes (e.g., boreholes, Berkads, infiltration galleries);
- Improving rangeland management;
- Building technical capacities on the national level for the Environment and Water ministries; and
- Providing training to communities on water resources management and community infrastructure maintenance.

A strong collaboration between the AfDB and UNDP will ensure that trainings are consolidated and that water mobilisation efforts are complementary in Somalia for i) Natural Resources Management (NRM); soil and water, sand dunes, ranges and grazing lands; ii) Market access; roads, feeder and access roads, markets, iii) Livelihoods; income generating activities and iv) Capacity building for relevant line ministries. Once AfDB plans and target areas are finalized, LDCF funds will be used to enforce sustainable NRM activities on the ground by developing integrated land-use policies in each zone of Somalia, and to empower CBOs to share knowledge with the communities on sustainable grazing practices and flood and drought preparedness.

47. *Somalia Water and Land Information Management (SWALIM)* service (currently in Phase V): This service gathers significant weather and climate data, as well as data on land and water resources, to support donor interventions. SWALIM manages 80 manual rain gauges, 6 Automatic Weather Stations (AWS) and synoptic stations in Somaliland and Puntland. Data is collected every month or every 5 days if there is urgency, such as an impending flood event. Data is sent to Nairobi, the headquarters of SWALIM, where the data is treated and analysed. Through the SWALIM initiative, FAO is therefore responsible to act as a data centre supporting each ministry's mandate. After data treatment, data is transferred back to the ministries in the form of monthly bulletins, 5-day forecasts and crop forecasts for Somaliland and Puntland. SWALIM is also ensuring that capacities are transferred to the national ministries; FAO SWALIM has a Letter of Understanding (LoU) with the pertinent line ministries to provide a Capacity Development Programme over 5 years. Ministries of Agriculture, Environment and Water in all zones are currently being seconded to FAO for training and access to data treatment/analysis equipment. Two ministry representatives from each ministry are being trained. Every 6 months there is an inter-ministerial coordination committee to discuss monitoring needs/issues. An issue is that after training, the trained individuals often leave for NGOs.

48. Currently, alerts are disseminated by weekly and monthly bulletins, and via email/radio. Due to monitoring constraints, downscaled forecasts for flood and seasonal droughts are required. Also, stakeholder consultations indicated that alerts would be more effectively communicated with SMS.

49. SWALIM has created a drought tool to quantify which areas are most vulnerable. They have also conducted a land degradation assessment (LANDA), including detecting land-use changes over time using satellite images. Within SWALIM, they have also created a working group to establish a flood risk and response information management system. FAO is also training NGOs to develop contingency plans for floods and droughts. Furthermore, in South Central Somalia, FAO works mainly with NGOs using Cash for Work (CFW) schemes.

50. Most relevant to this project, FAO is leading Farmer Field Schools throughout Somalia. The technical experts provide guidance on Soil and Water conservation practices in addition to sustainable grazing practices.

The LDCF financed project will be used to build off the capacity building work by FAO SWALIM, most notably in the development of in-house Climate Monitoring and Early Warning System (CM/EWS) centres for Puntland and Somaliland. LDCF funds will be used to do additional testing to improve alert dissemination in each zone and to decentralize disaster preparedness capacities with the development of District Disaster Management Committees (DMCs). Due to their significant experience in building capacities for farmers in Somalia, an inter-agency agreement between UNDP and FAO will be signed. Through this agreement, technical experts from FAO will be consulted during the establishment of Agro-Pastoral Field Schools. Similarly, in developing ASAL adaptation plans, the proposed project will exploit FAO SWALIM's drought tool.

**A. 5. Incremental /Additional cost reasoning:** describe the incremental (GEF Trust Fund/NPIF) or additional (LDCF/SCCF) activities requested for GEF/LDCF/SCCF/NPIF financing and the associated global environmental benefits (GEF Trust Fund) or associated adaptation benefits (LDCF/SCCF) to be delivered by the project:

**Outcome 1: Policies, plans and tools reviewed, revised, developed, adopted and implemented by government to mainstream and enhance adaptive capacity and mitigate the risks of climate change on vulnerable communities and critical ecosystem services**

*Without LDCF Intervention (Baseline) Component 1:*

51. Ministries active in the environmental sector, such as the Ministries of Water, Planning, Agriculture and Livestock and Women in all zones of Somalia, have limited understanding of climate change and its impact on ecosystem services. For instance, no ministry has ever conducted a climate change impact assessment to be able to outline potential adaptation options. Consequently, other than the NAPA (2013), there are no policies, strategies or development plans which address how to effectively adapt to climate risks. Only ad-hoc, general policies on the environment and disaster risk management exist, such as the National Policy on Environment in Somaliland and a Disaster Risk Reduction Framework in Puntland. Cross-sector, coordinated institutionalization of climate risk management has yet to take place.

52. Moreover, rural populations rarely profit from and abide by the existing environmentally-related policies and regulations because they are unaware of their existence. During government consultations, it was pointed out that a major barrier to implementation of existing policies is the lack of awareness and communication of the policies to key stakeholders, namely local authorities, the private sector, communities and NGOs.

53. In addition to having limited, unenforced and unrecognized policies, institutions also lack the technical and human resource capacities to fulfil their mandates due to lack of financing and often frequent restructuring. With no training curriculum in place and a lack of training materials available for environmental fields, the availability of skilled local trainers is limited. Universities currently have no mention of climate change in any of their curricula for agriculture, water resources engineering and other related disciplines. The concept of climate change is essentially absent from any formal educational institutions at all levels from primary to higher education. Additionally, key implementing ministries require assistance in project planning, implementation and monitoring. Without such capacity, ministries have no autonomy in carrying out projects and works and often rely on donor management.

54. The process of environmental integration into community planning through donor support is on-going (e.g., JPLG district planning for water and EU MDG land use initiatives). Communities and government stakeholders are well aware that climate change is affecting the environment and the ecosystems services that it provides. However, there is a notable lack of awareness and planning on what actions are required to specifically address the impacts of climate change, so as to improve ecosystem services.

55. Furthermore, disaster risk preparedness is extremely weak in all zones. Knowledge on disaster preparedness and management is minimal for all relevant Disaster Risk Management (DRM) institutions from national down to district level outlets. Technical and operational capacities are weak and even absent in some cases (the centralized agency for DRM in South Central has only been functional for one year). Although droughts and floods are becoming more

frequent in Somalia, there is no national institution which can provide forecasts (forecasts are provided by FAO SWALIM, FEWSNET and IGAD's ICPAC). Monitoring infrastructure is also scarce due to the destruction and theft of equipment during periods of civil unrest since 1991.

56. Key ministries involved with the environment, natural resource management and land planning in each zone are subsequently discussed. Their inadequacies and needs are detailed. Disaster risk management capacities and needs are, likewise, discussed in a subsequent section.

## Environment, Natural Resource Management and Land-Planning

### South Central

57. Since the initial stages of the NAPA process there have been several restructurings of the cabinet and ministries of the Federal Government of Somalia (FGS). The new and current focal point has been designated by the President as the Ministry of Petroleum, Mineral Resources and Environment (MPME). This ministry is also the new focal point appointed for GEF. The Environment Department of the MPME is fully mandated to address environment issues, and to serve as the coordinating body for all environment related policies and programs.

58. The previous Ministry of National Resources, which was formerly responsible for environmental management, drafted the National Environmental Policy, which has yet to be finalized. The policy specifically addresses climate change as a major challenge, and refers to the NAPA as the guiding document for taking further action. The National Environmental Policy prioritizes three areas with respect to climate change: 1) to develop capacity and institutional strengthening for stakeholders in respect to climate adaptation, climate change, and climate variability, 2) to encourage demonstration of new ideas and techniques through field based interventions that improve resilience of the population and ecosystems, and 3) to set up information, education and communication campaigns for stakeholders on the risks due to climate change and climate variability. In addition to the National Environmental Policy, a National Environmental Action Plan (NEAP) has also been developed. The NEAP is an important guiding document, which this LDCF-funded project builds upon by aligning the project activities with the priority actions listed under the NEAP. The NEAP has a section on climate change and recommends the development of policies and frameworks in three main areas, which include climate change, flood management, and drought management.

59. With the overarching role of coordinating development in South Central, the Ministry of Planning and International Cooperation (MoPIC) is responsible for cross-sectoral planning and ensures that activities are in line with government development plans and are not duplicated by other development partners. The MoPIC is also responsible for the coordination of the Federal Government's Annual Work Plan (AWP), whereby each ministry at the Federal level has submitted a detailed work plan for 2014 to inform the Government programme of work in line with this Constitutional requirement. Under the AWP, the Ministry of Planning and International Cooperation has three main tasks which include: 1) Development of a 5 year National Development Plan (NDP) and poverty reduction strategy, 2) Improve national statistical systems and institutional capacity in statistics, and 3) Conduct Social Economic Survey.

60. Coordination issues, particularly in funding and management of ministry-level initiatives, remain serious challenges to the execution of the Federal Government's peace- and state-building goals. To address these issues, the Ministry of Planning and International Cooperation coordinates efforts across ministries and streamlines aid planning and delivery. This arrangement more efficiently brings together ministries and potential foreign donors and international financial institutions in implementing the government's peace- and state-building goals.

61. Another institution that is concerned with Climate Change is the Ministry of Water and Energy. The Ministry of Energy and Water's key priority is to identify areas of weaknesses in the energy sector, and to develop policies that address energy and water challenges. The Ministry maps out Somalia's national resources, infrastructures and facilities to ensure the government reclaims them, especially in cases where they have been misappropriated for private use. The Ministry understands the importance of sustainable energy resources that are essential to economic recovery strategies as outlined in the government's Economic Recovery Plan. The Ministry of Energy and Water Resources had, in the past, offices for 18 regional water authorities across the country. The 1991 civil war brought destruction on a massive scale, and since then no rehabilitation or reconstruction works have taken place, leaving the buildings abandoned for many years. In the AWP, the Ministry of Energy and Water plans to develop master plans for urban water, sanitation

and solid waste management for major towns. The Ministry of Energy and Water also aims to enhance Somali water and land information management and is a key stakeholder in the Land-use policy development activities.

62. As agriculture plays a very important role in the economy of the South Central region, the Ministry of Agriculture also has a critical task of addressing climate change adaptation. Somalia's farming areas are concentrated in the southern part of the country, in the Gedo, Middle Juba, Lower Juba, Lower Shebelle, Middle Shebelle and Hiran regions. The Juba River and Shabelle River pass through these regions, rendering the soil more conducive to crop cultivation than the comparatively arid north, where agriculture is a less dominant livelihood source. The Ministry of Agriculture aims to rehabilitate vital crop production and infrastructure in South Central Somalia through building livelihood strategies for agricultural production and widening access to the agricultural market for producers.

63. The semi-arid and arid environmental conditions of much of the country make pastoralism the most viable livelihood for most Somalis. The Ministry of Livestock, Forestry, and Range is responsible for supporting pastoralist livelihoods in South Central Somalia. The majority of Somalis rely on livestock production for their subsistence and basic economic livelihood. The Ministry is plagued by low capacity due to very few new young livestock professionals, who have graduated from technical schools and universities to replace near-retirement professionals in the Ministry. This problem is compounded by the fact that there is an insufficient budget for livestock development programs. Under the AWP, the Ministry of Livestock, Forestry and Range plans on creating productive infrastructure for livestock. To this end, the ministry will a) review and update the regulatory and policy framework, b) construct and rehabilitate laboratories, a central drug unit, veterinary clinics and warehouses. The second major goal of the Ministry is to improve the management of forests and rangelands through a widespread forestry program.

### Somaliland

64. Amongst the national institutions in Somaliland, two stand out with particularly important functions in relation to environment, natural resource management and land use planning. These include the Ministry of Environment and Rural Development (MERD) and the Ministry of Planning and Development (MoPD). Other important institutions at the Somaliland zonal level with regard to climate change adaptation include the Ministry of Water, Ministry of Livestock, and Ministry of Agriculture.

65. In accordance with its constitutional directive, the Ministry of Environment and Rural Development (MERD) is best positioned to be the lead agency for taking action on climate change in Somaliland. The mandate of MERD is to develop the pastoral sector and to protect and conserve the environment through sustainable development aimed at eradication of poverty. The Ministry has a National Policy on Environment, which recognizes the requirements set out in Somaliland's Constitution and provides a framework for the management of Somaliland's environment and natural resources. Other policies and plans that support the work of the Ministry of the Environment include the National Environmental Action Plan & Strategy to Combat Desertification and the Rangeland Management Policy. MERD is an emerging ministry that has been operating in the past in an environment characterized by inadequate financial, technical and managerial capacities and a weak legal framework. The ministry is particularly ill-equipped in regard to knowledge and capacity to analyse, plan for and manage the impacts of climate change.

66. With the overarching role of coordinating development in Somaliland, the Ministry of Planning and Development, MoPD, plays a crucial role in climate change adaptation, particularly in regard to cross-sectoral planning for climate change. The mission of the MoPD is to achieve rapid sustainable development in order to improve the quality of life for people of Somaliland. The key functions of the institution are to 1) provide accurate, relevant and timely information about people and economy; 2) prepare national and regional development plans; 3) formulate policy guidelines; 4) mobilize domestic and external resources; 5) register local and international NGOs; 6) coordinate development activities and 7) ensure efficient allocation of resources.

67. The MoPD has developed a National Development Plan (NDP) for 2012-2016 for which it will employ both government allocated budget and development assistance from donors for implementation. The plan includes sectors that are directly linked with the LDCF1 project including environment, rural development, agriculture, livestock and disasters management. The NDP discusses the scarcity of water resources, soil erosion, loss of biodiversity and natural resource depletion. However, the plan fails to describe in detail how it will address such climate change issues and does not allocate any budget for adaptation activities.



68. Other institutions that need to address climate concerns include the Ministry of Water, the Ministry of Agriculture, the Ministry of Livestock and the Ministry of Labour and Social Affairs (the latter of which considers gender issues). The Ministry of Water has established a framework for the management of water resources which includes a Water Policy, Water Strategy, Water Act and water regulations. The Ministry of Agriculture is also at an advanced stage with regard to the development of policies and frameworks, namely, the Somaliland Agricultural Policy, the Agriculture Master Plan, Draft Agricultural Rules and Regulations, Agricultural Land Registration Action and Agricultural Land Ownership Law, and a Food Security Act. The Ministry of Livestock also has a National Livestock Policy. Agricultural and veterinary extension services are extremely limited, as is the maintenance of water infrastructure.

#### Puntland

69. In recognition of the need for an institutional approach to the environment, the Ministry of Environment, Wildlife and Tourism (MoEWT) in Puntland was established in 2009, to undertake the huge task of bringing environmental issues under one umbrella for better coordination of policies, strategies and programs. However, since its creation, serious technical and human resources gaps, as well as problems with the administrative organization at all levels, and particularly at the regional and district levels, have not been resolved. The Ministry remains ill equipped, understaffed, and lacks the technical expertise to implement the policies and objectives required to fulfil its mandate. Recently, a new minister was appointed to the MoEWT and the ministry has accelerated its development significantly in the past year. Tasks in progress include development of an environmental policy, a capacity needs assessment and a human resource system for improved performance; however, none of these have been completed or approved. With regard to climate change, the MoEWT is keen to integrate climate concerns into its policies and plans, but currently has limited capacity to do so. According to Stakeholder Consultations, integration of environmental concerns into the State planning and management processes and provision of guidelines for environmental sustainable development is seen as crucial in Puntland.

70. With the overarching role of coordinating development in Puntland, the Ministry of Planning and International Cooperation has the mission to play a pivotal role in attaining and sustaining high socio-economic development through enhancing partnerships and promoting the effective use of international and national resources. One of the key roles of the Ministry, is to maximize the benefits from foreign assistance to finance programs and projects in an efficient way. The Ministry plays a key role in ensuring that activities are in line with government development plans and are not duplicated by other development partners.

71. Other institutions that need to address climate concerns include the Puntland State Agency for Water, Environment, and Natural Resources (PSAWEN), the Ministry of Agriculture, the Ministry of Livestock and the Ministry of Women's Affairs and Family Development. PSAWEN was created in December 2000 under the Presidential Decree of Law No. 2 and approved by both the Cabinet and Ministries. It became fully operational in 2001 as the sole institution responsible for water, energy and minerals and was established as an autonomous agency under the Office of the President. The agency was mandated to report on water supply status, plan locations for service delivery, implement project funding by external resources, and monitoring of water quality standards. With a monitoring role, PSAWEN has the features of a regulatory body, but in practice it engaged in direct service delivery through technical assistance and minor repair of systems in rural areas owned by local governments. This agency has had serious financial constraints and has not played an active role in either service delivery or regulation and requires major capacity development.

72. As a decentralized body, PSAWEN is extended up to the regional level through the Regional Water Authorities. The Authorities and their staff are professionally responsible to PSAWEN and under its technical guidance, while being administratively responsible to the governor or the region. The regional level Water Authorities play a critical role in the operation and maintenance of water infrastructure and are important stakeholders for capacity building activities. The total staff of PSAWEN at the regional level is 96 consisting of engineers, drillers, mechanics, electricians, plumbers, finance officers, revenue collectors and watchmen<sup>14</sup>.

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<sup>14</sup> JPLG Sector Functional Assessment - FINAL REPORT - April 18 2012, <http://jplg.org/documents/Documents%5CJPLG%20Documents%5CPuntland%20-%20Sector%20Functional%20Assessment%20-%20FINAL%20REPORT%20-%20April%2018%202012.pdf>

73. The Ministry of Agriculture is responsible for agriculture in Puntland. While farming is very marginal in Puntland, it is increasing in popularity as a livelihood in some areas; agriculture is beginning to play a key role in providing alternative livelihoods to charcoal producers and promotion of agro-forestry is seen as a key strategy for reducing deforestation. As such, the Ministry of Agriculture's role in food security and local livelihoods is increasing every year and provides a critical coping mechanism to hedge against droughts. Additionally, the linkages between livestock, water resources, forest resources and agriculture are very closely linked in Puntland.

74. In spite of its growing mandate, the Ministry of Agriculture is characterized by a lack of financial resources, natural resource management institutions, and agricultural inputs and services. This has affected their ability to support agricultural development. Furthermore, there are no extension services and no training curriculum to improve the understaffed ministry. As with other ministries, availability of skilled local trainers or training materials is limited.

75. The Ministry of Livestock and Animal Husbandry is responsible for provision of livestock-related services. Existing livestock institutions include a network of veterinary services, the chamber of commerce, the Puntland Board of Livestock Traders and the Livestock Transporters Association. In spite of its mandate, necessary husbandry-related policies and regulations are lacking in Puntland due to the ministry's lack of technical and operational capacities.

76. As previously stated, in all zones, disaster preparedness capacities are also weak. The following details the capacities and needs of the relevant DRM institutions throughout Somalia.

## Disaster Risk Management

### South Central

77. Weather monitoring ceased as soon as the civil war erupted in 1991. This saw the loss of all the monitoring systems through vandalism and lack of maintenance. The collapse of the monitoring system was then followed by many years of missing data when the FAO Food Security Analysis Unit (FAO-FSAU) in collaboration with some NGOs and UN agencies re-established a few rainfall stations in Somalia in 1997 with the hope of reviving the network of weather observations. Unfortunately this network did not last long due to lack of maintenance and prevailing insecurity. Though SWALIM has made an effort to re-establish the monitoring network, only the rainfall monitoring network has been rehabilitated to match with the pre-war network.

78. South Central recently established a focal disaster management organization. Less than a year ago, the Federal Government of Somalia announced that the Cabinet had approved draft legislation on a new Somali Disaster Management Agency (SDMA), which had originally been proposed by the Ministry of Interior. The secondment of skilled national staff to SDMA by the International Organization for Migration (IOM), improved the capacity of the institution to coordinate emergency response. SDMA led Technical Working Groups under the Mogadishu IDP relocation Task Force, before the relocation plan stalled in July 2013. SDMA also played a key role in coordinating IDP profiling exercises in some IDP settlements in Mogadishu, in collaboration with UNHCR and Save the Children UK.

79. However, SDMA's capacity for long-term preparedness on climate impacts such as droughts and floods remains extremely limited. Based on Stakeholder consultations, it is critical to mainstream DRR into the policies and plans of existing and well-established ministries including livestock, agriculture, women's affairs and water ministries. Also, local NGOs and civil society organizations have taken a lead role in responding to disasters in the past and must be considered as important implementing agents for DRR activities in South Central, particularly considering the institution is still nascent and has the weakest capacities of all zones.

### Somaliland

80. The National Environment and Research and Disaster Preparedness and Management Authority (NERAD) received its mandate through a disaster management law/policy passed in 2007. NERAD is supported at the national level by the National Disaster Council (NDC) and the Disaster Management Steering Committee (DMSC). At the regional and district levels, Regional Disaster Management Committees (RDMC) and District Disaster Management Committees (DDMC) respectively will form part of the DRM system.

81. NERAD carries the key functions of disaster preparedness and disaster response in Somaliland. The goal of NERAD is to prevent frequent occurrence of disasters and reduce vulnerability of communities by improving sustainable coping capacities to decrease the overall impact of disasters on lives and livelihoods of Somaliland communities. Given that the frequency of both floods and droughts are expected to increase across Somalia due to global climate change, NERAD will be a key institution for enhancing resilience of Somaliland communities.

82. However, NERAD suffers from serious capacity gaps including inadequate qualified staff; inadequate staff recruitment; low level of staff skills and knowledge on disaster management; limited access to information due to inadequate skills on Information Communication Technology (ICT); lack of adequate physical assets/infrastructure and transport; and lack of capacity building for Disaster Preparedness and Management Committees (DP&MCs) at all levels. With regards to climate change, there is little or no knowledge on even the basics of climate change and its impacts, particularly with regard to disasters such as droughts and floods.

## Puntland

83. HADMA is the focal agency for Disaster Risk Management. It is an autonomous organization under the auspices of the presidential office, supporting the Puntland communities in time of humanitarian need and disaster management. Line Ministries are required to work closely with HADMA to ensure the effectiveness of all humanitarian assistance provided by the different stakeholder during the occurrence of disasters. With assistance from UNICEF, in September 2012 a Puntland Disaster Preparedness Contingency Plan was developed. This Contingency plan makes several references to climate change and its impacts on disasters. Recommendations put forward in this plan are supported by the Puntland government and international community.

84. With support from UNOCHA, in June 2011 Puntland developed a Disaster Risk Reduction Framework, which set the foundation for development of a comprehensive policy. Subsequently, a Puntland Disaster Risk Reduction and Management Policy was developed. Currently in a finalized and translated into Somali draft form, this policy needs to be urgently adopted by Cabinet. Legislation to implement key provisions of the policy, including contingency funding for disaster response, funding for preparedness and the formalization of disaster response structures, needs also to be urgently drafted and enacted.

## Gender

85. Finally, continued socio-economic and political constraints faced by women including gender inequality in education and other areas of Somali life removes important women voices from the public sphere and limits their coping capacity. The Somali Compact acknowledges that women have been disproportionately affected by discrimination and have been denied full participation in all aspects of Somali life. At the heart of the Somali Compact is that the rebuilding and governance of Somalia requires broad participation by all Somalis, including women. The Ministry of Women and Human Rights Development, which is a newly created ministry, is responsible for reversing this inequality and protecting the rights of women, children, and other disadvantaged groups of people. Under the AWP, the Ministry of Women and Human Rights Development is responsible for establishing social protection frameworks for vulnerable groups. However, the Ministry of Women and Human Rights Development requires significant capacity development on gender-sensitive climate change adaptation measures, as well as training on how to increase women's representation in adaptation decision-making and strategy development.

### *With LDCF Intervention (Adaptation Alternative) Component 1*

86. To address the aforementioned needs, activities under Component 1 will focus on creating an enabling environment for Climate Change Adaptation (CCA) by addressing NAPA priorities 1 and 3 recommending land management and disaster risk management activities respectively. Given the serious capacity constraints and lack of existing institutional policies, regulations, plans and mechanisms to carry out basic functions, the first activity will focus on training and building capacities to plan implement and monitor climate adaptation projects. This will include training of 60 government officials from the MPME, SDMA, MoSPIC, Ministry of Agriculture and the Ministry of Water and

Energy (South Central), the MoEWT, HADMA and the Planning and International Cooperation (Puntland), the Ministry of Planning, Environment and Rural Development and NERAD (Somaliland) in addition to the Ministry of Women's Affairs in all zones on public administration topics such as project planning, management and monitoring, performance monitoring systems, budget processes, accountability mechanisms, etc. A Public Administration Specialist experienced in reinforcing the capacities of multi-sectors will be hired to build institutional capacity on facilitating cross-sectoral management of CCA activity planning, management, monitoring and accountability. The Public Administration Specialist will develop a capacity building plan, which will include workshops, on-the-job training, and development of project management tools, development of HR policies, etc. related to CCA. This activity will enable these ministries to rely less on donor management in the future and take the lead in the planning, implementation and monitoring of CCA projects in the next phases of LDCF and future CCA projects as well as other development projects.

87. It is important for all relevant ministries and other government institutions in South-Central Somalia to have a basic understanding of climate change and adaptation before further action can be taken. Under Component 1, staff from all relevant line ministries will be invited to attend a series of interactive training workshops to enhance their knowledge of climate change. This is a key activity to build the foundation for further policy action such as the integration of climate into policies. These workshops will also help to provide international best practices on how to mainstream climate change into policies. It is envisioned that this activity will help bring climate change into policy discussions and formulation processes in the future. In order to carry out this training program, a Climate Change Specialist will be positioned within the environment ministries in each zone at the MPME, MoEWT and MERD in South-Central, Puntland and Somaliland respectively, who will develop training materials, conduct workshops and prepare and disseminate materials such as briefing notes, fact sheets, presentations, guidelines for mainstreaming climate change into sectoral policies and climate risk screening tools.

88. After completing the basic trainings, key technical staff from each of the above mentioned ministries will carry out sectoral studies of the impacts of climate change on their departments. The LDCF financed project will provide experts in land-use planning, climate vulnerability and risk assessment and economics. These will be positioned within the environment ministries in each zone, but will provide extensive support to other ministries in the zones to complete their sectoral studies. The Climate Change Specialist in each zone will coordinate with each other and the respective line ministries to ensure that all the sectoral studies use the same methodologies for assessment. The MPME will be responsible for compiling all the sectoral studies into a South-Central Climate Impact Assessment Study that will form the basis for development of a National Climate Change Policy. Similarly, the Ministries of Environment will be responsible for compiling all the sectoral studies into the Puntland and Somaliland Climate Impact Assessment Studies which will take into account Arid and Semi-arid Land (ASAL) analyses. The ministries of Planning in Puntland and Somaliland will use this study to create adaptation plans, from which aspects will be incorporated into Puntland's next 5-year National Development Plan, Puntland's 5 Year Agricultural Strategic Plan and Somaliland's National Development Plan.

89. A federal National Climate Change (NCC) Policy will be developed, taking into account cross-sectoral vulnerabilities, impacts and costs for adaptation. The Policy will streamline the coordination of Climate Change / Disaster Risk Management related programmes/projects to have coherent on-the-ground programming. It will act as the over-arching, prominent policy to guide the current patchwork of sectoral policies related to the environment which cannot be easily decentralised to address all levels of governance. The policy will have the capacity to identify and resolve any transversal climate change issues across Somalia, particularly when policies conflict between zones. Although the policy will not address climate change mitigation at this stage of its development, additional financing for mitigation is planned to be mobilized by the Office of the Prime Minister.

90. In order to ensure sustainability in facilitating adaptation activities, the NCC Policy will specify how to channel future diversified funding for climate change adaptation and disaster risk management. Financing schemes will be designed to serve cross-sectoral agendas so that support will grow for adaptation- and mitigation-related activities across sectors. Development of the NCC Policy will be based on successful demonstrations in other African countries such as Zambia.<sup>15</sup> The development of the NCC Policy will mandate representation of Somalia in international and regional climate negotiations, conferences and events that promote South-South cooperation. Nine relevant and LDCF

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<sup>15</sup> Government of the Republic of Zambia, Ministry of Tourism, the Environment and Natural Resources, *National Climate Change Response Strategy*, December 2010.

trained government officials (3 from each zone) will be supported to attend, participate and represent Somalia's interests in climate discussions and negotiations.

91. The Ministry of Petroleum, Minerals and Environment in South Central and the Ministries of Planning in Somaliland and Puntland will also be supported to carry out a study to identify a mix of financing sources to fund sectoral climate priorities by exploring both the international climate change financial landscape as well as domestic financial resources from taxes. With more than 50 international public funds and 6,000 private equity funds providing climate change financing, Somalia has no capacity to access and channel these funds to address the climate and development needs identified by the NAPA.<sup>16</sup> To empower Somalia to access this available financing, a study will be carried out by preferably, a qualified professional of Somali origin or an international expert, and national expert on financing needs, global and local resources and modalities for accessing financial capital. The final deliverable will include information on investment, financial flow and adaptation economic analysis of different medium- to long-term adaptation options to assess the burden of climate change on the public budget by conducting a Climate Public Expenditure and Institutional Review (CPEIR) and assessing the barriers for financing adaptation in the country. Scenario analyses will analyse cross-sectoral impacts, the sources of funds (e.g. private, public, donor, etc.) and the maximization of co-benefits (e.g. employment creation and adaptation needs).

92. In order to support the understaffed ministries and their need to recruit university graduates with relevant technical expertise, a climate module, with sector-focused sub-modules, will be developed and integrated into the curriculum of universities in each zone offering educational degrees on environment, natural resources, public planning and administration, agriculture, etc. The modules will include lessons on basics of climate change, Ecosystem based Adaptation, sectoral impacts, integrated land and water management principles, and international best practices on climate adaptation. The sub-modules will be designed in collaboration with faculty and will be subject specific. For example, for agricultural courses; a session on the impacts of increasing temperature on crop growth can be developed. In addition, linkages with an international University will be evaluated to broaden the exchange and to build sustainability for the programme.

93. This approach will be taken in light of the fact that a separate course on climate change may not be successful due to low awareness and demand for such education. However, existing curricula touch upon environmental issues without going into climate change. A climate change module would enhance the knowledge and capacity of young academics and future professionals to address climate change impacts across different disciplines. A Climate Education Expert will be hired to develop the modules. Consultations with faculty from key departments will first be carried out to gather information on existing curricula and to ensure contextualized modules. Relevant teaching materials on Climate Change Adaptation best practices will be developed. A lead faculty member will be selected from the existing staff at the University and trained to deliver the course contents.

94. One of the underlying causes for vulnerability in Somalia is the lack of management of natural resources and ecosystem services, which stems from poor land-use policies. Land degradation resulting from soil erosion, deterioration of physical and chemical properties of the soil, long-term loss of natural vegetation and conversion of forest to non-forest areas pose major threats to pastoralist and agro-pastoralist livelihoods. Present vulnerabilities will be exacerbated by temperature rise,<sup>17</sup> increased flooding and droughts and other climate impacts. The lack of institutional policies to deal with resource based challenges further exposes communities to climate change. Thus, building resilience of both human and ecological systems is an optimal way to deal with future uncertainties. Policies are required to institutionalize resiliency. Stakeholders in all three regions identified the need for an integrated policy which considers land and water resources as well as the various livelihood strategies that depend on the use of land, water and forestry resources. Thus, it is recommended that Land-use Policies be developed and implemented by a range of stakeholders. Land-use policy and planning offers a no-regrets approach to climate change. The key to successful implementation will be a broad consultative design process for the policy, community mobilization and participation from the policy formulation stage, legal and regulatory frameworks, and clear roles and responsibilities. Each zone will have its own

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<sup>16</sup> UNDP Sep 2011. *Blending Climate Finance Through National Climate Funds A Guidebook for the Design and Establishment of National Funds to Achieve Climate Change Priorities*

<sup>17</sup> Hartmann, I., Sugulle A., Awale, A., Nov 2009. *The Impact of Climate Change on Pastoral Studies of Somaliland*. Candlelight Report on the Environment.

land-use policy. The LDCF1 project will ensure that these and all policies create or updated integrate the role of climate change on vulnerability, particularly on women.

95. A reactive emergency response approach has remained the predominant way of dealing with disasters in Somalia till now. The awareness and coordination of policy makers, media, civil society, NGOs, UN agencies and other stakeholders remains low about disaster risk management. There is no national policy for DRR in South-Central, a major hindrance to effective action. The other two zones have draft frameworks and contingency plans, but these are yet to be put into effect. In order to effectively reduce drought and flood risk, a disaster risk reduction policy will be developed in South-Central zone and a resource mobilization plan for its implementation initiated by developing a comprehensive Project Proposal. Similar to the development of the UN Joint DRM program prepared for Somaliland, a holistic document that clearly defines the capacity needs and investments required would help the Federal Government to mobilize international funding for DRM. Through the LDCF, an interagency, multi-sectoral capacity assessment will be carried out and will put forward clear measurable actions to strengthen and maintain preparedness capacity. A systematically coordinated and comprehensive capacity analysis will be completed, focusing on high risk and climate vulnerable areas. The assessment will include stakeholders from government and civil society.

#### Federal Somalia Disaster Risk Management

96. In the selected districts in South-Central of the LDCF1 project, the major hazard is flooding around the Shabelle River and also recurrent drought. Given the very limited capacity of the SDMA, the LDCF1 will not only build the capacity of SDMA, but will focus on strengthening DRR capacities in the line ministries of Water and Energy, Agriculture, and Livestock. Disaster preparedness and mitigation training will include addressing man-made hazards that exacerbate climate hazards. For example, the deterioration of infrastructure along the Shabelle, which are almost all dysfunctional have contributed to increased flood disasters causing socio-economic and environmental devastation. Moreover, poor regulations on forest protection have led to heavy losses of topsoil and thereby increased erosion and siltation of canals and riverbeds. Sectoral studies undertaken will provide the basis for each ministry to create DRR strategies. A DRR Specialist, who will be based at SDMA, will work with each line ministry to provide workshops and training materials on topics such as hazard assessment tools, vulnerability mapping methodologies, disseminating climate information, and climate-proofing of infrastructure and investments.

#### Somaliland and Puntland Disaster Risk Management

97. For Puntland and Somaliland, the ministerial staff at regional and district level will be trained in drought and flood impact indicators. As mentioned previously OXFAM and FAO will establish commonly agreed indicators for drought and flood impact monitoring. Those commonly agreed indicators will be used for training the ministerial staff at regional and district level. There will be weather indicators and impact indicators. Weather indicators shall include: rain, wind and temperature. Impact indicators shall cover: i) food and nutrition, ii) water, iii) fodder, iv) human disease/HMIS data, v) animal disease, vi) locust attacks/invasions, vii) education and school attendance, viii) rangeland/pastor conditions, ix) displacement/migration, x) market prices of food and fodder, and xi) coping mechanisms.

98. To put drought warnings into action, a Climate Monitoring and Early Warning Systems Centre (CMEWS) will be established at HADMA and at NERAD to produce early warning products and communicate them to stakeholders in a timely manner. Given that most natural hazards in Somaliland and Puntland are climate oriented, with drought being the most severe and slow-on-set disaster, the government led early warning systems require significant improvement in order to minimize risks of such disasters. Currently, HADMA and NERAD use rudimentary methods to warn the Puntland and Somaliland communities such as with occasional messages by telephone and radiophone; however, communication is inadequate in terms of coverage and speed. There appears to be significant work on disaster risk and monitoring of potential hazards amongst the traditional communities in Puntland and Somaliland, however there is no centralized unit where this information can be brought together to determine a multi-hazard risk assessment, look at economic impacts, and support the issuing of early warning alerts and declarations of states of emergency. Links between the scientific community and traditional knowledge and at-risk communities need to be strengthened.

99. The CM/EWS Centres in Puntland and Somaliland and SDMA in South Central would consolidate hazard monitoring information and bring this to the attention of appropriate government officials, as well as to communicate reliable early warning messages to at-risk communities. The units will also be charged with receiving inputs from communities who are monitoring traditional early warning indicators at ground level. Testing of early warning systems

and message dissemination systems will also be conducted, and linkages to regional early warning mechanisms will be developed. This institution could also be charged with conducting lessons learnt exercises and disaster response reviews on a systematic basis.

100. Critical technical staff will be provided to the CM/EWS Centres and to support SDMA, including one hydro-meteorological expert. A crucial role of the experts will be to produce risk analysis, early warning, and perform coordination functions; e.g. organize contingency planning and post disaster assessments. They will also design DRR policies, guidelines and conduct DRR trainings for ministries, regional disaster management committees and communities. Initially these specialized experts will be deployed for the programme implementation period with gradual absorption of these experts in the government institutional setup. Based upon results of negotiations with the government and situation on the ground, decisions for absorbing these experts in the government system will take place during the course of project implementation. A gradual tapering out of this support will also help in ensuring that institutional sustainability is achieved over the course of the project.

### Empowering Somali Women (All zones)

101. Component 1 will also be used to increase the representation of women in decision-making and strategy development. Training and workshops on managing climate adaptation projects and on the basic principles of climate change and gender-sensitive adaptation will be provided to women. Women will also be supported to represent Somalia in international and regional climate negotiations, conferences and events. University women will be able to gain knowledge on climate change and gender-sensitive adaptation. In fact, women from each zone will be supported financially to attend programmes with updated climate modules.

102. Furthermore, the National Climate Change Policy and National Disaster Management Policy to be developed will account for the gender dimensions of climate change. Also, each ministry will be responsible for placing an emphasis on the gender aspects of adaptation into existing sectoral policies, plans, laws and regulatory frameworks.

## **Outcome 2: Models of community and ecosystem resilience developed and implemented in pilot areas selected in consultation with government and community stakeholders**

### Without LDCF Intervention (Baseline) Component 2:

103. Water is one of the most crucial natural resources for the communities in Somalia. A study in 1998 by UNICEF on access to water in Somalia underscored that, —a relatively small proportion - probably less than 20% of the total population - was believed to have access to water throughout the year; albeit with significant regional variations. The target districts for the proposed project, at present, are water starved, and climate change threatens to create greater water scarcity during times of drought. NAPA consultations in 2013 indicated that the major underlying cause of poverty and the leading hazard faced by all zones is the rising frequency of drought. In fact, a majority of settlements (e.g., up to 92% in the target districts) have reported loss of assets due to drought. Additionally, the pattern of the rainy seasons is changing with time and the frequency and amount of precipitation is becoming more unpredictable. Prolonged periods of rain and flash floods are frequently experienced. According to a UNDP survey, 73.5% of households in the Lower Shabelle region of South Central were affected by floods between 2000 and 2010.<sup>18</sup>

104. In spite of experiencing rainfall, none of the target communities have the knowledge and capacity to harvest and store the water for use during the dry season. Women and youth often have to walk for long distances in search of water and pasture for their livestock. This has resulted in boys and girls not attending school and women having to leave their children alone at home. Women and youth are also often attacked while in search of water and while fetching firewood.

105. Overall, stakeholders of the NAPA consultation sessions indicated that there is an awareness amongst communities that climate has been changing in the past few decades. Most community members cited the increasing frequency of droughts and floods, and rising temperatures as indicators of climate change. However, communities do not understand how poor land and water management can exacerbate climate change impacts. Rural populations simply

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<sup>18</sup> Community Census: on Poverty Versus Socio-Economic Indicators, South Central Zone, Report 3, UNDP, 2010.  
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do not know how to respond to the uncertainty in the climate. Though some limited sustainable land management practices are taking place in surrounding communities due to initiatives such as PROSCAL, the EU MDG programme and PREP (see Section A.4), for the most part the communities lack the knowledge and capacity to protect and manage their natural resource base and the ecosystems upon which their lives and livelihoods depend.

106. Land degradation due to overgrazing, deforestation and poor land-use planning has exacerbated the impacts of droughts significantly. The most common sustainable land management practices include soil bunds, water harvesting, and gully stabilization. Most of these responses are located around the main agro-pastoral systems where loss of topsoil, nutrient decline, and water scarcity are predominant issues. For example, through the MDG initiative funded by the EU, Adeso, an NGO acting as one of the implementing agents, has begun work in 30 villages across Puntland to rehabilitate rangelands and promote soil and water conservation practices. Through the MDG initiative, community based projects are being implemented including reforestation of the grazing lands with suitable and adapted tree species, construction of barriers, small dams and soil bunds to slow down water flow leading to erosion, rehabilitation of existing dams and water ponds, control of growing gullies and rehabilitation and reduction of grazing pressure on pastures. Similarly, the UN Joint Programme for Sustainable Charcoal Production and Alternative Livelihoods is one of the key programs helping the government and communities of the region to curb deforestation through sustainable land use management.

107. However, in spite of such examples by the EU and the UN as well as other organizations and donors tackling the issue of land degradation, sustainable land management practices are scattered and insufficient to cover the considerable breadth of damage throughout Somalia. In fact, according to the Country Report on the Millennium Development Goals 2013, there has been an 18.5% decrease in land area covered by forest between 1990 and 2010.

108. Additional hazards faced by the communities include the inability to prepare for droughts and floods. There are no district level, or community level, disaster management capacities. Currently, if early warning information in communities, it is usually passed on in a very ad-hoc manner by leaders to others through SMS or word of mouth. There are also no disaster committees or plans for preparation of droughts and floods. Consequently, communities are rarely forewarned about extreme events. For instance, the Burao district in Somaliland reported that 27% of the settlements in the district were affected by unforeseen floods which caused significant displacement of people and loss of livestock. A prime example is the flood of October of 2007, along the Shabelle River in South Central where the flood swept through thirty villages, destroying significant farm land and crop stores and causing hundreds of families to flee their homes. Without any community-based warning system, many small villages in the vicinity were completely cut off.

109. Another hazard voiced by respondents to a UNDP survey carried out in 2008 included the lack of high agricultural input costs.<sup>19</sup> Drought resistant seedlings are limited in all zones, in spite of the fact that all zones are drought-prone.

### South Central

110. The South-Central region is largely characterized by three distinct physio-geographic zones which include: 1) the central coastal plains, with a wide sand dune system; 2) a broad limestone-sandstone plateau covering all of central and southern Somalia; and 3) the flood plains of the Juba and Shabelle rivers in the south, which provide the highest agricultural potential. Both these rivers, as well other main Somali drainage networks, have their headwaters in the neighbouring countries of Ethiopia and Kenya, and are most affected by the rainfall from these territories.

111. Land use in most of central Somalia consists mainly of grazing and wood collection for fuel and building. In the south both rainfed and irrigated agriculture are practiced, especially in the riverine areas of the Juba and Shabelle rivers. Current estimates are that over 70 percent of the arable lands are utilized for rain-fed crop production. The Juba and Shabelle rivers flow year round and their seasonal flooding enable South-Central Somalia to be the main crop producing area and support the highest concentration of livestock. Small scale subsistence farmers use spate and controlled irrigation and grow crops on receding flood waters, while larger commercial farms employ irrigation systems that rely on pumps and storage reservoirs that are filled during periods of peak flow. Crops are also grown under rainfed conditions in the region. It is estimated that 1.25m ha is reasonably suitable for cultivation (FSNAU)<sup>20</sup>. Crops grown under in the area include sorghum, millet, maize, groundnuts, cowpeas, beans and cassava. Access to inputs and extension services has been disrupted in many areas. Historically, the state has been the source of agricultural inputs

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<sup>19</sup> UNDP Poverty Profile 2008: Participatory Community Census for Poverty Assessment and Mapping: Nugaal.

<sup>20</sup> Food Security and Nutrition Analysis Unit: Somalia: [www.fsnau.org](http://www.fsnau.org)

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with the private sector not willing / able to compete. With the collapse of the central government the private sector has become more active though still on a limited basis. Policy, regulations and management are weak or absent and access to credit and markets is difficult thus limiting returns to productivity.

112. Even though most of Somalia's fresh water resources exist in the Juba and Shabelle rivers, both river basins are water deficient. Water supplies for domestic purposes are unreliable and not well distributed due to poor infrastructure. Groundwater potential is limited due to limited recharge rates. Water supplies since the outbreak of the war in 1991 are run by unregulated private entities with no common vision or coordination. Water management, on and off-farm, is weak in the absence of water use planning, regulation and management. Small irrigation groups practice a low level of localized on-farm water management but in the absence of a central authority with a sound strategy and management framework, authority and manpower capacity, the region will remain prone to flooding, inefficient water use, salinization and water logging. Commercial irrigated farming has been greatly affected by the security situation. On-farm infrastructure has not been used nor maintained and some has been destroyed by floods. The once thriving banana (formerly the second largest export), melon and fruit production/export business has disappeared although there have been attempts to revive it.

113. Other surface water mobilization infrastructure includes earthen-lined dams. Unlike northern Somalia where berkads are very common, southern people prefer to use wars<sup>21</sup> for rainwater harvesting. The main reason for this is the favourable clayey soil type for the construction of wars. Clayey soils favour the construction of wars, however, they sometimes have to be lined up with plastic sheets to prevent water loss through seepage. In cases where the source is lined, the storage period is known to increase by up to two months due to reduced seepage. The sizes of wars vary depending on manpower available in villages for their construction. Water can last up to six months, depending on the lining material and consumption rate.<sup>22</sup>

114. Water resources management of the two rivers involves two major issues, namely flood management and irrigation water supply. The high floods in the Juba and Shabelle Rivers inundate scarce cultivated land along the river course regularly. The continuing deterioration of the flood control and river regulation infrastructure, coupled with unregulated settlement in flood plains and the recent practice of breaching river embankments to access water for wild flood irrigation, have increased the vulnerability of the riverine communities to progressively smaller peak flows. The deposition of high sediment yield of the river course confined within embankments has raised the bed level over the years. Hence, the river banks are regularly breached and the areas surrounding the river courses both in the Juba and Shabelle Rivers are flooded every other year.

115. The current degradation of the environment started in the post-independence early years when government management and regulation weakened or stopped. Degradation accelerated with the collapse of the central government, the influx of "refugees" from less secure regions, changing weather patterns, unsustainable land use and increasing poverty. Over more than twenty years of disrupted governance and insecurity, the already inadequate management and protection of natural resources has collapsed almost entirely.

116. It should be noted that in some parts of South-Central continue to experience sporadic armed conflict, and have minimal access to basic services. The new Federal Government is making efforts to re-establish services, yet the regions of the South-Central zone remain as some of the poorest and vulnerable areas of the country.

### Puntland

117. The Puntland State of Somalia is a semi-arid region where livestock production constitutes most of the economy - over 60% of the population is sustained by pastoral livelihoods.<sup>23</sup> In 2005 UNDP estimated the population of Puntland to be approximately 6.8 million (out of whom around 350,000 were considered internally displaced). Pastoral livestock production systems, which contribute at least 90% to the total value of commercial and subsistence

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<sup>21</sup> Wars are unlined dug-out 2-3 meter deep water catchment structures with surface areas ranging from hundreds to thousands of square meters. They are dug by an excavator, which drops the materials to create a wall on the downstream part of the excavated area. Water is led by ditches to the war. Water retention time in a war is dependent not only on water usage, but soil type and condition as well. Proper site selection is therefore necessary for the war to be able to hold water for longer periods. Generally, wars have been somewhat unsustainable water sources because of siltation and maintenance problems. They are also not easy to organize and maintain at community level, especially when initially constructed by outsiders.

<sup>22</sup> Rural Water Supply Assessment, FAO-SWALIM, 2007

<sup>23</sup> [http://eeas.europa.eu/delegations/somalia/documents/press\\_corner/20131023.pdf](http://eeas.europa.eu/delegations/somalia/documents/press_corner/20131023.pdf)

production,<sup>24</sup> are mostly found in Puntland's vast arid areas. These areas are characterized by marked rainfall variability, and associated uncertainties in the spatial and temporal distribution of water resources and grazing land for animals. Pastoralists have developed management systems based on strategic mobility, which are well adapted to these difficult conditions, but are increasingly becoming futile due to rapid environmental degradation, climate change and growing urbanization. The last 8 rainy seasons in Central Somalia have been below average,<sup>25</sup> resulting in severe droughts that have had devastating effects on pastoral livelihoods, hence, the rising numbers of malnourished children and hunger. Recurrent droughts in the region, combined with pervasive poverty, means that communities barely recover from one shock before being subjected to the next. Without sustainable resource management, it has been difficult to increase productivity to reduce the poverty and food insecurity of nomadic populations.

118. Puntland has some of the highest levels of land degradation in the country (FAO), and recent analysis shows that tree cover has reduced by an average of 2.8% per year between 2001 and 2006 (SWALIM), with 70% of total landmass affected<sup>26</sup>. Degradation of land and other natural resources is manifested in desertification, soil erosion, secondary salinization and waterlogging. In addition to the pressures on natural resources by pastoralist livelihoods, the underlying causes of land degradation include lack of awareness on the rate of desertification, charcoal trading and unregulated settlements, all of which have also put a heavy strain on local woodland resources, making them more vulnerable to the effects of climate change. In recent years, gully erosion has destroyed important valleys creating deep gorges that often restrict mobility of both pastoralists and their animals.

119. Water is also a critical resource that is under threat in Puntland by a combination of factors including poor management, lack of infrastructure, degradation and climate change. Water scarcity has been one of the main traditional sources of social conflict in Puntland. Puntland is considered seriously water-stressed zone because of its arid environment. The people of Puntland rely heavily on groundwater for most of their water needs, due to a lack of reliable surface water sources and no perennial rivers. However, both permanent and seasonal water sources exist. The permanent water sources include natural springs, oases, boreholes and some relatively deep hand-dug wells, while seasonal sources comprise man-made earth dams (waars), berkads and natural depressions.

#### Somaliland

120. In Somaliland, agro-pastoralism and pastoralism are the most important sources of livelihoods. Agro-pastoralism ranges from farmers owning large herds but keeping only a few resident animals on the farm to small scale-farmers owning only a few animals. Agro-pastoralists are increasing in number because traditional nomads can no longer rely on livestock alone for their livelihood, given the fact that pasture land has diminished and deteriorated over the years.

121. The agricultural system in Somaliland is predominantly subsistence in nature. The principal crops are sorghum and maize grown mostly for household consumption. Fruit and horticultural farming, which is relatively small, is mainly commercial. Rain-fed farming accounts for 90% of the total area cultivated, while the area under irrigation constitutes only 10%. The sector is dominated by smallholder farmers who tend small farms ranging from 2 to 30 hectares in area. The size of the average farm is approximately 4 hectares.

122. Pastoralism is the dominant livelihood in arid regions. In spite of dwindling grazing areas, the pastoral livelihood contributes significantly to the Somaliland economy. Livestock production has historically and culturally been the mainstay of livelihood for the majority of the people in Somaliland. Livestock production contributes 60% of the GDP and about 85% of foreign export earnings. According to Somaliland in Figures (Ministry of National Planning and Development), there were 18,570,000 head of livestock in the country as a whole in 2009.<sup>27</sup> It is assumed that this figure is only a rough estimate given the porous borders and considerable internal and cross-border movement.

123. Due to their dependence on natural resources, both pastoralism and agro-pastoralism are climate sensitive and have proven to be extremely vulnerable to climate change. The impacts of climate change have compounded land degradation due to overgrazing, deforestation and poor land-use planning. The impacts of land degradation on the

<sup>24</sup> Ministry of Environment, Wildlife and Tourism, Invitation to Puntland Environmental Conference, April 2014.

<sup>25</sup> EU-funded Food Security and Nutrition Analysis Unit (FSNAU) - Emergencies and relief type operations in Somalia rely on the information that is provided by FSNAU. The programme has been financed by the EU since 1994, though is now a multi-donor programme.

<sup>26</sup><http://adesoafrika.org/wp-content/uploads/2012/09/Your-Environment-Is-Your-Life-Project-Profile-Final-October-2013.pdf>

<sup>27</sup> National Development Plan, 2012-2016, Somaliland Ministry of National Planning and Development.

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ecosystem services are significant and include loss of animal/plant products, food and livelihood security, soil cover, regulation of water, and biodiversity. According to the NRM Survey Baseline Report carried out by the EU, the Nugaal district of Somaliland is severely affected by land degradation; 46% of the land has been degraded due to overgrazing of pasture land, 28% due to deforestation, 22% due to soil and gully erosion, and 4% due to invasive species. Massive deforestation has also taken place throughout Somaliland, particularly in search of trees to produce charcoal.

124. Water availability in Somaliland is primarily more dependent upon underground reservoirs rather than on surface water bodies, as there are no major rivers or other permanent surface waters in the country. Earth dams are commonly used to trap surface runoff while springs and berkads are prevalent for water supply. Surface water supply in Somaliland is mainly dependent on rainwater during the two rainy seasons (April to June, and September to November).

125. The local communities in Somaliland have adopted different means of coping with water shortages. In addition to the above-mentioned surface water sources, some agro-pastoralist households harvest and store rainwater in underground ditches with capacities of about 6 m<sup>3</sup>, resembling berkads. The ditch is lined with a plastic sheet to prevent water from percolating into the soil. The water is used for household consumption and in some cases for irrigation. Twenty-litre jerry cans are also commonly used to store water in rural areas, as opposed to big plastic drums common in towns.

126. Investigations done by Faillace (1986) and Sogreah (1983) classified Somaliland into four hydrogeological zones, namely the mountainous zone, coastal belt, sloping plain and the plateau zone. Government consultations indicated a need in the plateaus for water and land management. The Hawd plateau was selected for the focus of the LDCF1 project interventions in Somaliland. The Hawd plateau has potential for some of the best grazing lands in the region and rehabilitation of these areas would have a large impact on pastoral and agro-pastoral livelihoods. The selected region falls within three drainage basins, including the Gulf of Aden, Toghdeer/Nugal, and Ogaden Basins.

127. Berkads are the major water sources in the Hawd plateau since there are no permanent water sources there. There are thousands of berkads of various sizes in Wooqooyi Galbeed and Togdheer regions, with more than 5,000 in the latter.<sup>28</sup> Evaporation accounts for significant water loss from berkads due to the high temperatures experienced in Somaliland. To reduce loss, local people cover berkads with locally available material e.g. tree branches and shrubs. The rate of berkad failure is very high. It is reported that in almost all districts less than 50% of berkads are functioning, and this is by and large attributed to poor construction practices.

128. The Hawd plateau and the northern water basins in general area characterized by a large number of small streams (toggas) which are mostly ephemeral and originate from the mountainous areas in the north-west (above 2000 m elevation) and flow to the coastal areas of the Gulf of Aden. This water can be used by communities through simple gabion-type structures (check dams) that divert the water into adjacent lands for infiltration or surface storage.

129. The Haud south of Hargeisa is covered mostly by a semi-arid woodland of scattered trees, mainly acacias, underlain by grasses that include species especially favoured by livestock as forage. The growing market for charcoal, most notably in the Gulf States, couple with domestic demand for fuel wood, has led to massive deforestation in Somaliland as a whole, and especially in the Hawd plateau. Even without this burgeoning industry, Somalia's forests have come under threat in the last 20 years: since 1990, forest cover has been continually shrinking over time, while natural forest regeneration has been slow due to the arid climate and weak public policy support. More recently, the use of acacia trees for charcoal production has put stress on forest-related resources on which pastoral livelihoods depend. This economically-driven deforestation is likely to continue as long as the charcoal industry serves as a lucrative livelihood. The increasing loss of the natural resource base throughout Somalia is a key contributing factor in causing humanitarian crises in the country. The centuries old coping strategies employed during periods of drought in the arid/semi-arid climate of Somalia are increasingly become impractical as resource depletion removes the natural resource assets which are heavily relied upon during drought events. The evergreen drought-tolerant indigenous vegetation species that provide feedstock to pastoralists has been lost to the demands for charcoal.

### Choice of sites

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<sup>28</sup> FAO SWALIM Rural Water Supply Assessment (2007)  
GEF5 CEO Endorsement Template-December 2012.doc

130. Using a number of selection criteria and government priorities, eight districts have been selected for implementation of projects. The selection criteria included the extent of land degradation, flood extent, high population, existence of other development partners, security situation and access. Government consultations further narrowed down the geographical focus of the project. Many of the interventions will benefit entire hydrogeological zones, while pilot activities such as district level adaptation plans and demonstration sites for soil and water conservation and other sustainable land management practices will be implemented in the selected districts. Given the high vulnerability, coupled with the much larger land area of South-Central as compared to the other two zones, LDCF funds will be used to support 4 of the 8 districts in this zone. Details on these districts are provided in Annex 7 of the Project Document.

*With LDCF Intervention (Adaptation Alternative) Component 2:*

131. To address the various problems that the communities within all zones are faced with, activities under Component 2 will focus on building the resilience of communities and ecosystems through community development and planning and implementation of ecosystem based adaptation measures. The activities will address all top four NAPA priorities on land management, water mobilization, disaster risk management and water diversion. The regions aforementioned (Nugaal and Bari in Puntland; Togheer and Wooqi Galbeed in Somaliland; Galgaduud, Middle Shabelle and Lower Shabelle in South Central) and described in detail in Annex 7 will benefit through the demonstration of planning tools, technologies and approaches for Ecosystem based Adaptation. Awareness on climate change and its likely impacts will be developed and communities will be supported to understand risks and methods for addressing them, encouraging a more proactive and less response-oriented approach to climate hazards. The three regions will serve as models for climate sensitive investments into water mobilization, agriculture, forestry, and management of climate and disaster risks.

132. As a first step in the LDCF1 project, grassroots Community Based Organizations (CBOs) will be supported, established or re-established where they have become defunct. This will build the crucial foundation required for implementing all of the activities under Component 2. The delivery of goods and services by local NGOs, through the support they receive from international NGOs that nearly always involve local NGOs or local CBOs in their activities, have resulted in a greater legitimacy of local organizations in front of communities, and in their capacity to gain their support. In all the regions, there exist various functional and non-functional social groups. Many of these groups provide a platform for community-based decision making and deliver governance functions or provide other social and economic support mechanisms.

133. Many of these groups do not have the knowledge and capacity for planning and managing an organization and require capacity building in basic organizational management. Also, these groups may not be socially inclusive, and it is important to set-up inclusive and representative entities with which the LDCF1 project implementation team will primarily interface with for planning, implementation and M&E. The LDCF1 project will require a focal institution with which to work with on community based adaptation strategies, and one that represents all members of the communities. These CBOs will also be crucial for the long-term sustainability of the project activities. A local NGO will be hired to either revive or create CBOs that represent villages and settlements that are stakeholders of the LDCF1 project. Existing institutions will either be strengthened or combined to create the CBO. Consultations with stakeholders, including both men and women indicated that a CBO with both women and men members is culturally acceptable, and in fact desired. The project will assist the CBOs in registration, setting up a Board, constitution and other governance and administrative structures. Training will be provided on basic organizational management, training methodologies, consensus building, and community-based, gender and socially equitable participatory natural resource management planning. This activity will be one of the first activities to be implemented under the LDCF to ensure community participation in design, implementation and monitoring of the LDCF activities.

*Agro-Pastoral Field Schools (APFS)*

134. Much of the ecosystem degradation and vulnerability of Somali communities stems from a lack of awareness and knowledge on natural resource management of grazing areas. Though these communities have in the past employed a range of effective practices, with the introduction of new socio-economic forces, population growth, climate change and changing sociocultural patterns – many of these methods are no longer appropriate. A field school approach is an ideal way to adapt existing knowledge with new insights, as it is designed for community managed learning and experimentation which provides an adaptation platform where groups of pastoralists systematically discuss their social,

economic and ecological issues on a regular basis. The overall Agro-Pastoral Farmer Field School (PFS) process is guided by a learning curriculum developed in participatory approach tailored to seasonal livelihood activities and challenges. In its application, the APFS concept is envisaged to contribute to improved livelihoods of the pastoral communities through creating unity, poverty reduction and strengthening of pastoral institutions thus leading to improved preparedness and reduced vulnerability to drought and other crises like flooding etc.

135. APFSs will focus on developing people's capacities through season-long participatory training. Areas for training include water conservation, subsurface dams, shallow wells, valley catchment, drought resistant crop varieties, backyard gardening, bunds and infiltration channels for retention of rain water, animal diseases control, livestock production systems, amongst many other topics.

136. The initial activities will involve training of facilitators and development of curriculum in partnership with the communities. The curriculum and training will ensure that knowledge on climate impacts and adaptation best practices are included. A local NGO, government extension workers, or community member will be trained as the facilitator for each APFS. Meetings with the pastoralists must take place regularly and for an extended period of time for the APFS to be successful. Other activities will include NRM planning workshops, baseline mapping of civil society and extension services, experience sharing workshops and other training as identified by the APFS such as in livestock diseases, marketing of livestock products, etc.

137. Other activities will include NRM planning workshops, baseline mapping of civil society and extension services, experience sharing workshops and other training as identified by the APFS such as Soil and Water Conservation practices. Once the APFS are set-up, the CBOs in the area will work with the APFS to select, design, construct and maintain small-scale community infrastructure that will improve livelihoods and maintain ecosystem services. The communities will contribute 20% of the project costs through financial or in-kind contributions. The infrastructure will include irrigation canals, soil bunds, gabion walls, etc. as per community identified needs and in line with adaptation strategies.

#### Technical Studies (all zones)

138. Given that there is very little technical information for the regions, technical studies at the watershed and sub-watershed level are required to inform land-use planning, infrastructure design and ecosystem based adaptation. A detailed study with up-to-date information on the Shabelle River basin is required. Studies will look at geomorphology, surface water runoff and infiltration rates, water quality, etc. and will also do an accounting of existing infrastructure and the status. An international engineering firm preferably having experts of Somali origin and with expertise in hydrological modelling will be employed to carry out the studies. The consulting firm will work closely with FAO-SWALIM and use their expertise and information where possible. These studies will provide an informed foundation upon which to develop water harvesting infrastructure, land-use plans and adaptation plans. The design of the studies will be carried out in collaboration with MoEWT, Ministry of Water, Hargeisa Water Supply and Ministry of Agriculture (Somaliland); MoEWT and PSAWEN (Puntland); and MPME and Ministry of Water and Energy (South Central) to ensure that the informational gaps are filled. The studies will then be used to develop Climate Adaptation Plans such as for the Shabelle Basin in South Central. This will be led by an International Expert (with preference given to an expert of Somali origin) in Climate Adaptation, who will be hired for a period of one year to compile the technical information, as well as carry out stakeholder consultations for developing the watershed level adaptation plan.

#### Community based DRM (all zones)

139. District Disaster Management Committees (DDMCs) will be established in each of the project districts. Master trainers will be trained within the DDMCs who will be responsible for training village level CBOs in disaster risk management. The DDMCs will also be responsible for developing district level DRM plans, stockpiling emergency supplies, setting up a transparent resilience fund, and disseminating early warnings to the village level. LDCF funds will be used to establish eight DDMCs to serve as examples for replication and scaling up by the relevant authorities. An NGO will be hired to establish committees with equitable representation of the community, ensuring adequate outreach and representation for women within the committees at decision-making levels. The NGO will provide the DDMCs with training on community-based early warning systems, climate change impacts, carrying out damage and needs assessments, carrying out vulnerability assessments and other relevant topics. The DDMCs will be responsible for developing district level DRM plans with climate change integrated into the plans. The DRM plans would build upon 1) results from technical studies, 2) local government and community consultations for adaptation planning, 3) hazard

maps for each district and 3) a detailed baseline study and survey carried out by the local NGO for both districts on the socioeconomic conditions, infrastructure and services, livelihoods, gender roles, land-use patterns, climate vulnerability (exposure, sensitivity and adaptive capacity) and an inventory of ecosystem functions. Each disaster authority will ensure linkages and communication systems between the committees at the district level and their regional and national offices.

#### Feasibility assessments for project interventions (all zones)

140. Through the LDCF1 project, a feasibility study and environmental impact assessment will be carried out to ensure suitability of the sites and to mitigate any environmental impacts. Many regions in all zones have high evaporation rates, and this will be taken into consideration while carrying out the feasibility assessments and designing the water mobilization infrastructure. Soil tests will be conducted to determine permeability. Other factors that will be considered will be to design appropriate dam depth to compensate for evaporation and leakage, well-compacting retaining walls and spillways, and placing protection on water sources to avoid contamination by animals or during flood events.

#### Flood management and water mobilization infrastructure (zone specific)

141. The LDCF1 will also invest in the rehabilitation of flood control and water management infrastructure and the improvement of flood control mechanisms with a view to reducing the incidents and scale of flood-induced humanitarian emergencies while also preparing for droughts.

142. The activities would include the following in each zone:

#### South Central

143. LDCF funds will be used to support the rehabilitation of 4 irrigation canals, rehabilitation and expansion of dams in all 4 target districts within South Central, and construction 8 new water diversion/flood routing structures, 2 in each district. Existing boreholes also need to be repaired, so funds will be used to rehabilitate 2 boreholes in Balanbale and 2 in Guriel.

144. The community consultations identified rehabilitation of canals in village Dayactirka Kanaalada of Afgooye and 2 major canals in Jowhar. These sites will be considered during the feasibility assessments. The diverted floodwaters will support activities such as tree nurseries, fodder production, crop production, livestock watering points, etc. These structures will have multiple impacts on reducing vulnerability and enhancing resilience, including improved livelihood opportunities, flood protection and increased availability of water.

145. In South Central, the rehabilitation, new construction and maintenance would be managed by the Ministry of Water and Energy, but would have community ownership integrated into the project interventions. The LDCF1 project will work closely with the Ministry to ensure that infrastructures rehabilitated under the LDCF1 window are complementary to the work being carried out by the Ministry. The community will help to identify the sites for flood control, and will also contribute 20% of the cost either through financial contribution or in-kind through labour. This would ensure true ownership and the long-term sustainability of the projects.

146. With improvement in water provision technologies, a participatory design phase, and strong ownership by the Ministry of Water and Energy, it is expected that dams, with their high water holding capacities, will be much more sustainable than the current use of shallow unlined water catchments and berkads. Moreover, water availability will be improved for a large number of the population and is expected to drastically enhance the resilience of rural communities, particularly in drought prone areas.

#### Puntland

147. Dams are also in high demand in the Puntland region. Both the government and community see the construction of medium to large scale dams as a top priority for enhancing resilience. Similar to South-Central the use of wars and berkads have proven to be less reliable for the various reasons described above.

148. Communities and the MoWET have worked together to select two potential sites for construction of dams. In Bandar Bayal district, they have identified an area near Labagarday, which is located 45 kilometres west of Bela, and falls in between Bela town and Dhodo. In Dangoroyo, community representatives suggested a site near Libaho, located 25 km west of Dangaryo town. Through the LDCF1 project, a feasibility study and environmental impact

assessment will be carried out to ensure suitability of the sites and mitigate any environmental impacts. The region has high evaporation rates, and this will be taken into consideration while carrying out the feasibility assessments and designing the structure. Soil tests will be conducted to determine their permeability. Other factors that will be considered will be to design appropriate dam depth to compensate for evaporation and leakage, well-compacted retaining walls and spillways, and protections of the water source to avoid contamination of use by animals. Moreover, clear plans for operation and maintenance of the facilities will be developed. This may also require training of the communities or relevant government staff.

149. Another important intervention will be the construction of erosion control/gully reclamation structures using cash for work in line with MoEWT supported rangeland management plans. Structural measures will include check dams and gabions that include loose rock, gabion and pole/brushwood constructed across the floor of the gully to reduce the channel gradient and then to slow runoff and to trap sediment. They will be constructed to facilitate the establishment of vegetation in the gully, which will eventually stabilize the gully and protect it from further erosion and rehabilitate the gully. Water diversions will support activities such as tree nurseries, fodder production, crop production, livestock watering points, etc. These structures will have multiple impacts on reducing vulnerability and enhancing resilience, including improved livelihood opportunities, flood protection and increased availability of water.

#### Somaliland

150. The Construction of small to medium earthen dams was prioritized by the communities in Somaliland. However, in general dams are not very common in Somaliland. This is mostly due to lack of suitable dam construction sites where leakage will be minimal, high costs of construction, limited machinery for construction, high maintenance costs due to silt removal and land degradation due to overgrazing as dams then to attract settlement in the surrounding areas. Thus, all of these factors must be taken in consideration when carrying out the detailed feasibility studies and environmental impact assessment, and the LDCF1 project will ensure appropriate measures to tackle these challenges are put into place.

151. The MERD has identified the construction of 2 earthen dams along with distribution infrastructure (i.e., pumps, pipes, channels, etc.), both at approximately 50,000 m<sup>3</sup> in size. The locations include Baligubadle in Hargeisa District and Heere village in Burao District. The design will be based on detailed technical studies, Environmental Impact Assessments and consideration of future climate projections.

152. Flash-flooding is also a common occurrence in parts of Somaliland. In particular, the sole source of water for all of Hargeisa town, a large borehole plant, is under threat due to an adjacent seasonal river which is prone to flooding. Thus, a flood control project at Geed Deble in Hargeisa District involving the construction of gabion at Hargeisa water sources will be built. The design will be based on detailed technical studies, Environmental Impact Assessments and consideration of future climate projections. The project will be managed by the Hargeisa Water Authority (HWA). The project team will be composed of the project manager, civil engineer, field officer and three cashiers and will be led by the Project Manager who will be overall in charges of project implementation.

153. Smaller scale flash-flooding is also a serious climate impact faced by communities in Somaliland. Communities discussed the need for flood water diversion structures, which would also help increase livelihood opportunities due to water mobilization. Under the project, construction of 5 water diversion structures to control soil erosion and enhance livelihoods at 5 sites will be undertaken in the villages of Duruqsi, Balidhiig, Warabaye, Dhoqoshay and Warcibran in the Hawd plateau of Togdheer region. Water diversions will support activities such as tree nurseries, fodder production, crop production, livestock watering points, etc. The project will divert floodwaters from streams and spread them onto adjacent land that will be used as either a farm, grazing reserve, agro-forestry plot or tree nursery. This entails the construction of a simple check dam across seasonal streams to block run-off and force its water to spread to neighbouring farms. Stones collected from nearby hills will be dumped on the riverbed mixed with material to fill spaces between stones and thus obstruct the runoff. The implementation will be carried out by an NGO and local communities. The NGO and the community will develop criteria for targeting participants and will develop a plan of action and timelines for implementation. Each water-diversion structure is expected to benefit 300 households.

#### Reforestation (all zones)

154. Reforestation activities in appropriate areas, particularly around the newly constructed infrastructure and in severely degraded areas will also restore important ecosystem services and enhance the resilience of communities. The

LDCF will support the planting of seedlings throughout the target watershed, and along river channels. The community capacity building carried out under the various outputs of the LDCF1 will help make this initiative sustainable through awareness raising and improved knowledge on natural resource management. LDCF funds will be used to reforest areas that have experienced the most deforestation. CBOs in the target area will be identified and supported to establish tree nurseries and raise plant saplings on a cost-share basis. Inputs and training will be provided to women and youth to establish business to raise plants. The LDCF1 project will purchase the saplings from the community members and the community will be engaged to plant them in the field on a cash-for-work basis. The CBOs will be tasked to care for the young plants in the field. The CBO may seek the help of forest guards and police to halt the illegal tree felling. The per tree payment rate will be mutually decided by the LDCF1 project team and CBOs. Besides local species and other native or exotic fast-growing, multi-purpose fodder shrubs or trees will also be promoted.

Building the Resilience of Women’s Livelihoods (All zones)

155. Similar to increasing the representation and capacity of women in climate change adaptation decision-making at the national level under Component 1, Component 2 will support women’s power and presence in community-based decision-making. Small grants will be provided for implementation of small-scale, community-based EbA and NRM measures based on priorities identified by women. Also, women representation will be required in the District Disaster Management Committees (DDMCs). The Disaster Risk Management plans to be developed by the DDMCs will be gender-sensitive.

156. Component 2 will focus on supporting women’s groups from each of the eight districts to build resilient livelihoods. Women’s groups will be selected from each zone for training to lead the piloting of innovative businesses aimed at adopting climate adaptation technologies (e.g., drip irrigation systems, and solar water pumps). In Somalia, women are more often than men, involved in operating small businesses due to variety of historical and cultural reasons. Women work on farms, and they may be best placed to operate equipment, such as solar pumps for shallow wells, which can be used to improve crop and vegetable production. Women can also be involved in the sale of water, as is the current practice, through private berkads. An expert will be hired to carry out a study that looks at the various options for climate adaptation technologies that can be set-up as sustainable businesses in the target districts. Key technologies will be prioritized based on the study and consultations with stakeholders. An NGO will be hired for implementation. The NGO will select 30 Women’s Organizations that will select members who want to jointly start an enterprise. The NGO will be guided by the Ministry of Women and Human Rights Development to effectively enhance the livelihoods and incomes of vulnerable women. The women will be provided with trainings on value-chain analysis and marketing, initial capital and assistance with setting up the business.

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

157. Risks and recommended countermeasures were identified during bilateral consultations during the project preparation phase. Key risks and mitigation measures underlying project development are indicated in Table 1.

Table 1: Key risks and assumptions

Risk	Rating	Risk Mitigation Measure
A low level of cooperation between executing institutions due to political divisions and the existence of distinct zones of Federal Somalia, Puntland and	Medium	Management arrangements include one clear focal point for implementation, the Ministry of Environment and Petroleum which also houses the GEF operational focal point. Each zone will have a Project Officer who will be in charge of activity implementation on a day to day basis. Programme outcomes will be maximized by having three clear Regional Committees (led



Risk	Rating	Risk Mitigation Measure
Somaliland makes the coordination of policy development challenging.		<p>by the zonal Project Officer) which will include relevant government representatives, district officers and NGO/CBO representatives for each zone. The Regional Committees will be responsible for implementing the zone's adaptation priorities.</p> <p>To unify climate change responses and facilitate fund mobilization for adaptation for Somalia, one federal Climate Change policy will be generated. In contrast, since land-use varies from one zone to the next based on the different climate zones present in Somalia and the different prevailing livelihoods, each zone will develop its own land use policy. This will avoid any inter-zone conflict and will target the adaptation needs in each zone. Similarly, Climate Monitoring / Early Warning System centres will be developed in each zone due to the varying capacities for disaster preparedness in each zone (DRM capacities are strongest in Somaliland and weakest in South Central).</p> <p>As evidenced by the New Deal Compact, the recent efforts of the international community to build consensus among the zones and reunify Somalia are positive. It is expected that positive progress will be made in this direction and political environment will become conducive for implementing the LDCF financed project. UNDP Somalia furthermore has excellent relationships with all the key partners and will play an active role in facilitating coordination.</p>
<b>Security risks</b> could affect project implementation, particularly clan-based conflicts over competing uses of natural resources.	Medium	<p>The target areas within the eight districts have been chosen based on the criteria of having a stable security situation. To ensure security, the project will work through local NGOs/CBOs, who have experience in project implementation, for project delivery. The security situation in the selected districts will be monitored closely and if necessary, project activities will be shifted to more secure areas or districts.</p> <p>Similar to the NAPA and LDCF preparation, project implementation will ensure that customary dispute resolution mechanisms are used to resolve any conflicts. For instance, traditional elders, religious leaders and clan leaders will continue to be consulted on any major implementation decisions for ground-based activities. Project implementation will also ensure an inclusive, participatory approach involving all key stakeholders including women and youth and an equitable distribution of benefits.</p>

Risk	Rating	Risk Mitigation Measure
		<p>The recognition of the new federal government by the EU and USA and supportive resolution of the UN Security Council to strengthen the national institutions is already having positive impacts for peace building in Somalia. LDCF funds will further support security by empowering the youth. Funds will be used to provide technical knowledge on climate change adaptation to current and prospective students (e.g., incorporating climate modules into existing degree programmes and offering scholarships for university degrees with climate modules). Also the security situation will be improved by creating clear, publicized land used policies and by improving the ecosystem services which support agriculture and pastoral livelihoods (e.g., through water mobilization and reforestation).</p>
<p><b>Limited climate monitoring</b> inhibits forecasting capabilities and the ability to develop detailed spatial mapping to allow for adequate adaptation and risk reduction planning.</p>	<p>Low</p>	<p>Since national forecasting capacities are absent in Somalia, regional forecasting products generated by FEWSNET, ICPAC and FAO SWALIM will be exploited by the Climate Monitoring /Early Warning System (CM/EWS) centres / focal points to be developed / supported in the proposed project. (The regional forecasts make use of the limited monitoring network in Somalia as well as data from neighbouring countries in the region and/or satellite images.) Such forecasts will be appropriate for the climate risk management approaches to be employed with LDCF funds that will not be highly dependent upon precise climate change scenarios. Rather, LDCF funds will focus on building the capacities of the CM/EWS centres in Somaliland and Puntland and the CM/EWS focal points in South Central to use the existing products for disaster risk reduction planning in the context of uncertainty. Funds will also support ministries and districts to generate development plans and adaptation decisions in the face of uncertainty. In such a manner, the proposed project will focus on building the capacities of the ministries/institutions to deliver adaptation and risk reduction planning with existing data. This is seen to be more critical than expanding the monitoring network when the CM/EWS and relevant ministries will not yet have the required human resources and technical expertise to maintain additional stations. Similarly, for early warning development, the project will support enhanced communication of existing forecasts and the development of district level Disaster Management Committees (DDMCs) so as to focus on the delivery of risk information to the communities.</p>

Risk	Rating	Risk Mitigation Measure
<p>The project could encounter delays due to the <b>lack of nationally-available expertise and human resources</b> and sustainability may be at risk if trained individuals leave government ministries/institutions for more lucrative private, international or non-governmental positions.</p>	Medium	<p>Universities will be supported to introduce climate modules into existing degree programmes so that students can be trained in the most up-to-date relevant climate change adaptation practices relative to their respective discipline (e.g., water and soil conservation methods for agricultural studies, optimal water mobilization infrastructure for civil engineering studies, etc). Students will be incentivized to follow fields where there is a climate change emphasis because LDCF funds will be used to offer scholarships in each relevant discipline. This approach will generate technically-savvy graduates who will then provide the required technical expertise to the understaffed ministries.</p> <p>The issue of the unavailability of requisite human resources will also be mitigated by recruitment of international experts (with preference given to those of Somali origin) who will work closely with in-country counterparts and will provide targeted capacity building activities (e.g., sustainable forestry, agronomy, water mobilization) in Component 1.</p> <p>Furthermore, an international fund mobilization expert will be engaged to ensure that the ministries have the necessary budget lines to keep the staff base or to enhance the technical expertise required if there are weaknesses in particular areas.</p>
<p>Water and natural resource management strategies are made ineffective by an unanticipated <b>increase in the frequency of flood events and continued drought</b> which jeopardizes agricultural and pastoral production</p>	Medium	<p>The project will take into account region-specific current climatic variability in the selection of the adaptation technologies. For instance earth dams will be placed in regions where significant water must be mobilized. Water diversions will be placed in areas to mitigate flood risks for downstream farmers/pastoralists. Water storage will be provided in the event that additional drought events occur. Project beneficiaries will also gain training in resiliency-building approaches such as soil and water conservation methods. The choice of adaptation technologies to be implemented will be contextualized based on the targeted needs (e.g., women, youth) so that all members of the rural populations can build resilience to climate shocks.</p> <p>Furthermore, the project will support women to have sustainable businesses in promoting adaptation technologies so as to diversify their livelihoods and provide them access to capital.</p>
<p>Targeted farmers and pastoralists are <b>sceptical and unwilling to use adaptation technologies /</b></p>	Low	<p>In Component 2, LDCF funds will be used to provide field demonstration sites in the form of the Farmer and Pastoral Field Schools. These sites will provide extensive training on the appropriate adaptation technologies for the target areas. LDCF</p>

Risk	Rating	Risk Mitigation Measure
<p><b>practices</b> so as to diversify their livelihoods and/or income diversification strategies do not significantly increase household incomes.</p>		<p>funds will then be used to provide small grants to the farmers and pastoralists so that they can use the adaptation technologies in their respective farms/grazing lands to improve their productivity.</p> <p>Funds will also be used to support women to promote adaptation technologies. The idea is to promote women-based groups to have sustainable businesses focused on the sale of adaptation technologies. Such an approach will build on the entrepreneurial spirit of Somali women, use existing women-based groups and provide women with alternate livelihoods and sources of income.</p>
<p><b>Water ministries have limited capacity to design, construct and perform maintenance</b> on water mobilization infrastructure</p>	Low	<p>With large physical infrastructure planned in Component 2, a Chief Technical Advisor (CTA) and water mobilization expert will be recruited to assist the Ministries of Water with proper design and construction of water mobilization infrastructure in each zone. The CTA and expert will be tasked in training the Water ministries on proper Operation and Maintenance (O&amp;M). The CTA will provide O&amp;M assistance throughout the entire project.</p>
<p>There is <b>insufficient technical and operational capacity</b> within the regional governments to coordinate drought and flood preparedness and to implement unfamiliar Ecosystem-based Adaptation actions</p>	Medium	<p>In Component 1, LDCF funds will be used to provide significant training for the ministries on climate change adaptation. A Climate Change expert will be seconded to each zone's Environment Ministry for the entire duration of the project. The expert will be tasked with familiarizing the ministries on Ecosystem-based Adaptation actions and how they contribute to supporting the livelihoods of pastoralists and farmers. Similarly, a Disaster Risk Management expert will be recruited to support the CM / EWS centres to be developed in the proposed project. The DRM expert will be tasked with reinforcing the drought and flood preparedness of the CM/EWS centres. The centres will be responsible for building the capacity of the District Disaster Management Committees (DDMCs) to be formed in the proposed project. The DDMCs will be trained to develop targeted disaster preparedness plans based on their district's vulnerabilities.</p>
<p>The <b>lack of politically recognized Environmental Impact Assessment procedures</b> causes unforeseen adverse</p>	Low	<p>During project preparation, an Environmental and Social Screening Procedure was used to identify any potential social/environmental risks and their required mitigation measures. The mitigation measures have been integrated into the project design. As only Somaliland has a formalized EIA</p>

Risk	Rating	Risk Mitigation Measure
social/environmental impacts		procedure which is not as rigorous as international approaches, an international EIA team (preferably with experts of Somali origin) will be recruited to conduct an internationally-recognized EIA assessment procedure during the first 6 months of the project. With such an approach, particularly with the physical infrastructure to be built in the all zones, this will avoid any hazards such as potential downstream impacts.

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

158. The LDCF financed project will also coordinate with related initiatives. Details on how LDCF funds will be used to complement the related initiatives are included in the boxed text below the descriptions of the initiatives.

159. The *Economics of Land Degradation (ELD) Initiative* in Somalia (2014, UNDP and GIZ, \$67,000). The ELD is an initiative for a global study on the economic benefits of land and land-based ecosystems<sup>29</sup>. The initiative is financed by the *Drylands Development Centre (DDC)*, a thematic centre of UNDP, and GIZ. The *DDC*'s development objective is to contribute to rural poverty reduction and increased food security for the communities living in rural drylands. DDC contributes to their objective by i) mainstreaming drylands issues into development frameworks leading to budgetary allocation for implementing livelihoods options on the ground; ii) strengthening the rural economy and creating and implementing livelihood opportunities; and iii) improving capacities of local communities for governance and sustainable management of local resources.

160. Along with the support of DDC and GIZ, the ELD is increasing the political and public awareness of the costs and benefits of land and land-based ecosystems by developing a methodology and tool to assess the Economics of Land Degradation (ELD) in Somalia (i.e., a tool to highlight the value of sustainable land management). The tool will provide detailed mapping exercises to help contextualize the ELD initiative by analysing existing findings concerning the economic valuation of natural resources.

The LDCF financed project will collaborate closely with the Drylands Development Centre. Consultations during project development indicated that in order to improve dryland development, the DDC must be implicated from the beginning and throughout project implementation. DDC will be consulted on Land-Use policy development, improving pastoral livelihoods and reinforcing community-based NRM in the dryland regions of Somaliland and Puntland. Findings from ELD will be incorporated into the Arid and Semi-Arid Land (ASAL) adaptation plans for Somaliland and Puntland. The plans will then guide adaptation activities for all zones in the future.

161. The *Joint Programme on Local Governance and Decentralized Service Delivery (JPLG)* (JPLG) (ILO, UNDP, UNHABITAT, UNICEF and UNCDF 2008 – 2015, 54.67m USD) supports regional institutions in Somalia, ensuring local governance contributes to fair delivery of services and stability in the country in eight programmatic areas: decentralization, land management, municipal finance, local economic development, service delivery, social accountability, planning and budgeting and fiscal transfers. JPLG has made significant strides in advancing local governance and in decentralizing services by supporting capacity development for a range of stakeholders from communities, women groups, district departments and line ministries. For instance, JPLG provided technical support to produce a draft policy guide for community engagement on local planning and social accountability with the Ministries

<sup>29</sup> For more details see <http://eld-initiative.org/index.php?id=23> .  
GEF5 CEO Endorsement Template-December 2012.doc

of Interior in Somaliland and Puntland. JPLG also conducted sector studies in water and natural resource management to assess the opportunities and capacities of key sector ministries and central authorities. At the district level, JPLG supported capacity for participatory and strategic planning to enhance the use of resources. It also supports women to get involved in development, through public meetings, training, outreach and media campaigns.

The LDCF financed project will work with JPLG to ensure that line ministries, districts, women-based groups and CBOs have reinforced capacities on climate change adaptation and disaster preparedness. Lessons learned on effective capacity building will be integrated into the proposed project. Land-use policy development in each zone will draw lessons from JPLG on how to properly engage communities. Also, findings from JPLG's sectoral studies on water and NRM will be integrated into the ASAL adaptation plans and land use plans to be developed with LDCF funds. The adaptation alternative to be provided by the project is to decentralize Natural Resource Management and disaster preparedness. CBOs will be revitalized to ensure sustainable land management and district Disaster Management Committees will be created to support community-based flood and drought preparedness.

162. The *Economic Development Programme for Growth and Resilience* (EUR 42 M) is another project under SHARE of the EU which aims to i) strengthen the livestock sector by boosting its export capacity at all levels and by supporting the *Sheikh Regional Technical Veterinary School*; ii) enhance crop production through small scale irrigation, grain banks and plant genetic resources; and iii) maintain continued support to information networks such as FSNAU and SWALIM to ensure timely information transmission on food, nutrition, livelihood security, land and water.

163. *European Commission's Humanitarian Aid and Civil Protection department (ECHO)* (EUR 40 m): ECHO supports interventions in the areas of protection, food security, health, nutrition, shelter, water and sanitation, hygiene promotion, livelihoods support, and coordination of aid. Assistance and protection actions will focus on the most affected regions of central south Somalia, where needs are still the greatest in addition to vulnerable pockets in Puntland and Somaliland. The Commission focuses on actions that save lives during emergencies such as treatment of malnutrition; emergency preparedness actions including surveillance; and interventions that increase the recovery and resilience of the communities most affected by recurrent crises. The Commission remains dependent on the implementation capacity of its operational partners on the ground, their level of access to populations and their ability to operate while reducing risks to their staff. The International Rescue Committee (IRC) with support from the European Community Humanitarian Office (ECHO) is working with those people who were displaced by the drought in the Mudug region in South Central Somalia. Working in cooperation with displaced communities, the IRC is providing water and sanitation facilities to those living in camps and settlements in Mudug by extending water pipelines and creating water catchment areas so that families, and their livestock, have access to clean, safe drinking water. Five boreholes have been repaired in camps and villages. The IRC has trained community members to maintain these water facilities and communities are responsible for water safety. Community members, in particular women, have been trained on hygiene promotion in order to prevent the spread of water-borne diseases in their families and communities. 40 community hygiene promoters have been trained and they conduct house-to-house visits, emphasising the importance of hand washing with soap and the safe disposal of waste. Over 27 000 people were reached by IRC - ECHO projects in 2012.

LDCF funds will be used to upscale and support timely warnings from ECHO and the Economic Development Programme for Growth and Resilience. The proposed project will also support disaster preparedness on national and local scales. It will build on ECHO's experience in training communities in the operation and maintenance of water facilities.

164. *IGAD Climate Prediction and Applications Centre (ICPAC)*. The ICPAC has a mission of fostering sub-regional and national capacity for climate information, prediction products and services, early warning, and related applications for sustainable development in the IGAD Sub-Region. ICPAC monitors droughts and floods indirectly

through seasonal forecast/outlook forums. The regional forecasts are developed using statistical regressions between seasonal rainfall and Sea Surface Temperatures (SSTs) and other climate indices that affect rainfall characteristics in the region. ICPAC products include, a) analysis of past climate, b) monitoring of current climate, c) prediction products, d) impacts and e) seasonal drought forecasts. ICPAC supported the NAPA preparation process through assessing climate data modelled projections.

165. IGAD is also implementing the *Hydrological Cycle Observing System (HYCOS)* project under IGAD's *In-land Water Resource Management Programme (INWRP)* Through HYCOS, IGAD is maintaining a river gauge network in Somalia to increase flood preparedness. HYCOS includes 30 river gauge measurement stations, 1 Acoustic Doppler Current Profiler (ADCP) and 10 rain gauges. Through the INWRP, IGAD is constructing water mobilisation structures in the Juba watershed between Somaliland and Djibouti.

The LDCF financed project will collaborate closely with the ICPAC while developing Climate Monitoring / Early Warning System (CM/EWS) centres. The centres will be trained in disseminating ICPAC seasonal drought forecasts. Also, the CM/EWS centres will incorporate all HYCOS river gauge monitoring measurements into their databases to enhance flood preparedness. Lessons learned on effective water mobilization construction for dryland areas (e.g., IGAD's work on the upstream Juba watershed in Djibouti) will be incorporated into the proposed project.

166. The *Food Security and Nutrition Analysis Unit (FSNAU)* supports monitoring all over Somalia on agriculture indicators, rainfall measurement, and market prices of food commodities. After every rainy season the field monitors come together with experts in food security and nutrition to analyse the previous season and its impacts on the community. The analysis is summarised in one map representing Integrated Food Security Phase Classification (IPC). The country is then categorised according to the prevailing situation in terms of food security/insecurity. The causes of food insecurity are also highlighted on the map including floods, insecurity, drought and/or population influx etc.

The Climate Monitoring / Early Warning Centers (CM/EWS) Centres and District Disaster Management Committees to be developed with LDCF funds will integrate any lessons learned from FSNAU on causes and means to mitigate food insecurity.

167. *Famine Early Warning Systems Network (FEWSNET)*. FEWSNET is an information system designed to identify problems in the food supply system that potentially lead to famine or other food-insecure conditions in Sub-Saharan Africa, Afghanistan, Central America, and Haiti. It is a multi-disciplinary project that collects, analyses, and distributes regional, national, and sub-national information to decision makers about potential or current famine or other climate hazard, or socio-economic-related situations, allowing them to authorize timely measures to prevent food-insecure conditions in these nations.

The Climate Monitoring / Early Warning Centers (CM/EWS) Centres will link with FEWSNET in early warning dissemination. The CM/EWS Centres to be developed with LDCF funds will exploit the FEWSNET drought forecasts.

168. *Somali Development Fund* (funded by DANIDA, DFID, Sweden for Somaliland) The SDF is a program led by Somaliland ministries to mitigate the impacts of drought. Water harvesting, mobilization, improved forage production, reforestation and livelihood diversification are stressed. According to local NGOs/CBOs, there is limited funding available for decentralized organizations/institutions.

169. *CARE International (NGO)* has several relevant projects to the proposed projects including:

- *Towards Sustainable Pastoralism in Sool and Sanaag*: research project aimed at identifying ways to ensure that pastoralism survives and thrives in the face of increased frequency of droughts, degradation of natural resources and resource based conflicts.

- ***Somalia Youth Leadership Initiative (SYLI)***: a new 5-year project in Somaliland and Puntland aimed at empowering Somali youth to contribute positively and productively to society. The project seeks to increase educational, economic and civic participation opportunities for Somali youth and help them become self-reliant. Project activities will include classroom construction and rehabilitation, improved community discussions on education, vocational training for unemployed youth, support for small business start-ups, and strengthening of youth groups as safe places for open discussions on problems facing the youth.

LDCF funds will be used to implicate youth in climate change awareness building. Funds will be used to empower youth by providing prospective university students with scholarships to study in one of the fields where climate modules will be developed under the proposed project (e.g., in existing agriculture, water resource engineering study programmes). Education for youth in climate-related disciplines will provide a pool of potential qualified recruits for the understaffed ministries.

170. Other related initiatives include:

- On-going work by the ***International Labour Organization***: focusing on land, forestry and water and how the government decentralizes service delivery. They are promoting Soil and Water Conservation methods, water mobilization, storage and harvesting.
- ***Candlelight*** work including nursery development to raise seedlings for reforestation. To date, Candlelight has generated 30,000 seedlings per year.
- ***Somali Institutional Development Project*** (UNDP, USD 5m, 2009 – 2015): Through this project, policy and law-making processes and systems are currently being developed. Human resource skills are also being enhanced in addition to improving public financial management and developing institutional infrastructure.

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

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

171. During project preparation, two extensive field consultations with the Stakeholders are planned. Bilateral and multilateral stakeholder consultations also took place to collect information and confirm costs and management arrangements. The overall goal of stakeholder consultations has been to identify relevant agencies involved with supporting rural community adaptation and disaster risk preparedness, particularly those who will be responsible for continuing project activities in the long-term. Consultations have ensured the proposed project is grounded in local realities whilst being aligned with national policies and will support dryland agro-pastoralists and pastoralists.

172. The following table shows the list of proposed consultations which will take place to develop the LDCF1 project document. The project outcomes, outputs and activities are based upon the recommendations of the stakeholders given the technical, operational and financial constraints of the project. The role and participation of each agency is indicated by the column headings described in the legend.

#### ***Legend***

Inception Consultations – participated in first mission consultations.

Technical Validation Consultations – participated in the secondary consultations used to confirm project activities and costs.

Validation Workshop – participated in the validation workshop.

Baseline Assessment – consulted to provide baseline situation during project development.



Management Arrangements – identified as a member of the project management arrangements (e.g. Steering Committee, etc.).

Risk/Barrier Analysis – consulted to document their view of specific institutional risks or barriers.

Policy/ Strategic Alignment to Priorities – institution has policies/strategies or implements policies / strategies aligned with project priorities.

Co-financing Identification – institutions / organizations which have other projects or existing material to support and be supported by the project financially.

Gender Representation – organization that is concerned with promoting the involvement of women during project development and implementation.

Upscale / Sustainability planning – responsible for scaling-up (duplicating) the project and reinforcing the sustainability of activities after project completion.

Potential Partnerships – Memorandums of Understanding obtained between ministries and institutions to support project implementation.

173. Furthermore, Somali women have been involved during project development and will continue to be involved during project implementation. Women are an important target group because they are more dependent on natural resources for their livelihoods. Climate change has a strong impact on the female beneficiaries who are living in rural regions and have limited mobility. In addition, women may be excluded from some activities due to cultural norms, or due to lack of capital and ownership arrangements that confer all rights to men in the family (Buhl 2005; Eriksen *et al.* 2005, Eriksen *et al.* 2007). This inequality is compounded by a lack of opportunities arising from limited access to education and information services which prohibit participation in decision-making. Due to all of these reasons, this project is targeting women to develop nurseries and to reinforce their capacities on national and district levels. Relevant gender-focused NGOs/CBOs such as the Somali Women Association will be involved during project design and implementation to facilitate the engagement and empowerment of women.

Table 2: Stakeholder Involvement Matrix

Stakeholder	Inception Consultations	Technical Validation Consultations	Validation Workshop	Involvement in Baseline Assessment	Management Arrangements	Risk/Barrier Analysis	Policy/ Strategic Alignment to Priorities	Co-financing Identification	Gender Representation	Upscale / Sustainability Planning	Potential Partnerships
Government											
Office of the President (South Central)	X	X	X	X	X	X	X	X	X	X	X
Ministry of Petroleum, Minerals and Environment (South Central)	X	X	X	X	X	X	X	X	X	X	X
Ministry of Environment, Wildlife and Tourism (Puntland)	X	X	X	X	X	X	X	X	X	X	X
Ministry of Environment and Rural Development (Somaliland)	X	X	X	X	X	X	X	X	X	X	X
Ministry of Agriculture (all zones)		X		X		X	X	X	X		
Ministry of Water		X		X		X	X	X	X		

Stakeholder	Inception Consultations	Technical Validation Consultations	Validation Workshop	Involvement in Baseline Assessment	Management Arrangements	Risk/Barrier Analysis	Policy/ Strategic Alignment to Priorities	Co-financing Identification	Gender Representation	Upscale / Sustainability Planning	Potential Partnerships
(Puntland and South Central)											
Ministry of Livestock (all zones)		X		X		X	X	X	X		
Ministry of Women and Family Affairs (Puntland)		X		X		X	X	X	X		
Ministry of Planning (all zones)		X		X		X	X	X	X		
National Environment Research and Disaster Preparedness and Management Authority (Somaliland)	X	X	X	X		X	X	X	X		
Humanitarian Affairs and Disaster Management Authority (Puntland)		X	X	X		X	X	X	X		

Stakeholder	Inception Consultations	Technical Validation Consultations	Validation Workshop	Involvement in Baseline Assessment	Management Arrangements	Risk/Barrier Analysis	Policy/ Strategic Alignment to Priorities	Co-financing Identification	Gender Representation	Upscale / Sustainability Planning	Potential Partnerships
Somali Disaster Management Authority		X		X		X	X	X	X		
Ministry of Energy (Somaliland)		X		X		X	X	X	X		
Parliamentarians (Somaliland)		X		X		X	X	X	X		
Technical / Research Institutions											
Hergeisa University		X		X							
Puntland State University		X		X							
Regional/ Sector											
District of Jowhar (community leaders, women representatives, local government)	X	X	X	X		X			X	X	

Stakeholder	Inception Consultations	Technical Validation Consultations	Validation Workshop	Involvement in Baseline Assessment	Management Arrangements	Risk/Barrier Analysis	Policy/ Strategic Alignment to Priorities	Co-financing Identification	Gender Representation	Upscale / Sustainability Planning	Potential Partnerships
officials)											
District of Jowhar, Balan Bale, Guriel, Afgoye, Bandar Bayla, Dangoroyo, Burao, Hargeisa, (community leaders, women representatives, youth representatives, local government officials)		X		X	X	X			X	X	
NGOs/CSOs											
Candlelight	X	X	X	X		X			X	X	X
African Development Solutions (ADESO)	X	X	X	X		X			X	X	X
Somali Women Association	X	X	X	X		X			X	X	X
Havoyoco	X	X	X	X		X			X	X	X

Stakeholder	Inception Consultations	Technical Validation Consultations	Validation Workshop	Involvement in Baseline Assessment	Management Arrangements	Risk/Barrier Analysis	Policy/ Strategic Alignment to Priorities	Co-financing Identification	Gender Representation	Upscale / Sustainability Planning	Potential Partnerships
Care International	X	X	X	X		X			X	X	X
Donor Partners											
UNDP	X	X	X	X	X	X	X	X	X	X	X
European Union / European Commission			X	X				X		X	X
African Development Bank, AfDB			X	X						X	X
Intergovernmental Authority on Development (IGAD)			X	X						X	X
UNDP Drylands			X	X						X	X
UNEP			X	X						X	X
United Nations High Commissioner for Refugees (UNHCR)			X	X						X	X
UN Food and Agriculture			X	X						X	X

Stakeholder	Inception Consultations	Technical Validation Consultations	Validation Workshop	Involvement in Baseline Assessment	Management Arrangements	Risk/Barrier Analysis	Policy/ Strategic Alignment to Priorities	Co-financing Identification	Gender Representation	Upscale / Sustainability Planning	Potential Partnerships
Organization (FAO)											
UN OCHA			X	X						X	X

174. The stakeholders identified during project preparation will continue to be involved in project implementation. A stakeholder involvement plan has been created to provide a framework to guide interaction between implementing partners and the key stakeholders, particularly end-users to validate project progress. All stakeholders involved in the NAPA formulation and LDCF consultations will be continuously involved to track the efficacy of stakeholder capacity building, both operationally and technically. Also, the Women's Organizations, Ministries of Women's Affairs, and female government officials and representatives will continue to be involved and consulted in order to ensure women are properly engaged and are active participants in the planning, implementation and monitoring of the project. A major criteria for selection of NGOs/CSOs for carrying out the baseline study will be the presence or gender capacity within the organization, to ensure that gender disaggregated data is collected and an M&E framework that reflects the gendered dimensions of climate change is developed.

During implementation, the communication and consultation process will be divided into three main phases:

Phase 1 – Developing a strategy and action plan:

175. This is the mobilization phase in the first year of the project. The details of the activities and implementation structures will be designed, partnerships for action will be forged and stakeholder engagement will focus around these design processes. The Environmental Impact Assessment and the Technical Studies will take place simultaneously during this phase. These two types of studies will focus on identifying any negative impacts of the proposed infrastructure projects along with mitigation measures. The technical studies will look at the feasibility of the projects, and will include cost-benefit analysis. Local authorities and communities will be consulted by both the EIA and Feasibility Study teams. Moreover, meetings will be conducted at the district level to gather local level data on climate impacts, trends in natural resource management, and other important baseline information. During these meetings, religious leaders, traditional elders, cultural groups and women's groups will be important stakeholders.

Phase 2 – Consultation through implementation:

176. This is the main implementation phase where investments will be made on the ground in the target areas and stakeholder consultation about engagement will focus on output-oriented actions. During this phase, community stakeholders will be deeply involved through cash, labour and in-kind distributions. The target for these contributions will be 20% of the total project costs where possible. The community will also participate in the implementation phase by facilitating access to the project areas for the project staff and consultants, and also helping to bring together a broad spectrum of the community to participate in any capacity building and awareness raising activities organized under the project.

Phase 3 – Project completion and scale up promotion:

177. The third and final phase represents the completion of the project. The plans for scale-up and long-term sustainability of the LDCF investments will be developed. Consultation will focus on learning, bringing experience together and looking at processes for continued post-project impact.

178. Specifically, in Phase 1, Technical Studies will begin from the project's inception. The studies are planned to take place during the first 2 quarters of the project, in which technicians will collect data from the field and gather indigenous knowledge. After the first quarter, suitable sites for retention basins, micro-dams and diversion structures will be identified. Based on the sites identified, an Environmental Impact Assessment will be conducted at the beginning of the 3rd quarter to validate the appropriateness of the sites and to provide mitigation plans for any expected environmental and social impacts. The local populations in the target districts, as well as surrounding populations, will be consulted to obtain data to conduct the EIA. Ultimate locations for construction works will be determined throughout the third and fourth quarters based on conclusions from the technical studies, EIA, and consensus among the local populations and the technical Ministries.

179. At the beginning of the project, over-arching criteria to determine training beneficiaries will be well-defined. A specific beneficiary selection group composed of community heads and representatives from the technical ministries (Ministry on the Environment, Ministry of Planning and the disaster management authorities) will be created to conduct the field consultations to see how local customs should be used to determine beneficiary selection criteria.

180. The gender-disaggregated survey, to be conducted by women-focused NGOs/CSOs, will also take place during Phase 1. The survey will be used to obtain baseline data, such as for adaptation technology preferences.



181. In Phase 2, public consultations will become more of an ongoing exchange of information where there will be two main purposes:

- 182.
- To gather information from beneficiaries and stakeholders about the impact and effectiveness of the planned water mobilisation (micro-dam, reservoir, cistern, well and shallow well placement) and training strategies (Training of Trainers or lead farmers on-the-farm, demonstration plots); and
  - To provide interested government and donor stakeholders and the general public with information about the progress and impact of the project as it is implemented.

183. Phase 3 will be a process of ensuring completion, hand-over and long-term sustainability of the LDCF investment. Consultation will focus on bringing experience together, sharing key lessons learned (through the UNDP ALM and other forums) and looking at processes for promoting scale-up of this project in order to build the resilience of more rural mountain rain-fed farmers and pastoralists.

184. Overall, the types of consultation mechanisms to be used include:
- Meeting with the members of the newly formed National Climate Change Committee to obtain lessons learned;
  - Discussion with local government authorities and local leaders on their roles in sustaining the project activities
  - Meetings with NGOs/CSOs to confirm their roles in project implementation in the future;
  - Discussions with the trained participants of the FFS to determine the lessons learned and development of case studies
  - An external evaluation of the project that will highlight the successes, challenges and lessons learned for dissemination to NGOs, donors and government stakeholders.
  - Exposure visits for neighbouring districts to the project districts to visually observe and meet with communities that have implemented soil and water conservation principles and are employing adaptation technologies
  - Identifying successful women-led enterprises for adaptation technology and linking them with additional finance and supporting them in gaining recognition

**B.2 Describe the socioeconomic benefits to be delivered by the Project at the national and local levels, including consideration of gender dimensions, and how these will support the achievement of global environment benefits (GEF Trust Fund/NPIF) or adaptation benefits (LDCF/SCCF):**

185. The project will have significant adaptation and socio-economic benefits. Overall, the project will provide climate change awareness and support preparedness measures for approximately 43,000 agro-pastorals and pastoralists in all three zones of Somalia (half of which are expected to be female). At least 7,200 households will be beneficiaries of water mobilization and diversion and will also be provided with climate change awareness due to community involvement with construction, infrastructure O&M and working with the CBOs. The LDCF financed project will also provide training on Public Administration for 20 government officials in each zone (60 total) so that they will have the capacity to manage climate adaptation projects. At least 30% of the ministry staff who will receive training will be women. In order to support understaffed ministries, 3 students in each zone will be sponsored to attend environmentally – and Natural Resource Management- focused higher degree programmes which will increase their technical capacity.

186. LDCF funds will also provide training on climate change adaptation for 50 beneficiaries in each zone. Public awareness campaigns on the environment, Climate Change and associated policies, most notably the Land Use Policies to be created in each zone, are predicted to benefit at least 1 million people.

187. In terms of Disaster Risk Management (DRM), a Climate Monitoring / Early Warning System Centre (CM/EWS) will be created in both Puntland and Somaliland. DRM training will be provided for five CM/EWS staff as well as five DRM focal points in the relevant ministries in South Central. A National Disaster Management Policy, with clear roles and responsibilities defined and a comprehensive survey of the capacity needs for managing disaster risks will also be generated. On a local level, each district will be supported to establish Disaster Management Committees (DDMCs). Each committee will consist of 15 people. The DDMCs will be responsible for generating DRM plans specific to the district. It is expected that the DRM plans will benefit at least 20% of the target populations. For example, in Somaliland 120 villages in Hergeisa and 110 villages in Burao are expected to benefit from the DRM plans.

188. Sixteen agro-pastoral Field Schools (APFS) will also be created (2 in each target area) using LDCF funds. The schools will teach both farmers and pastoralists about best practices to help them build resilience to climate change such as Soil and Water Conservation methods. Training will be provided to a Master trainer who will be responsible for training facilitators in each APFS. Two hundred (200) agro-pastoralists in each APFS will be direct beneficiaries trainings.

189. On a local level, two CBOs per district will be supported with grants to implement small-scale, community-based EbA and NRM measures, such as soil bunds, small ponds, etc. As each CBO consists of 10 people (including 3 women), it is estimated that 160 CBO members will benefit from the targeted trainings. In addition to the CBO-led NRM measures, each zone will benefit from 200 hectares of reforestation. The number of rural people who are expected to benefit from improved forest ecosystems is approximately 20,000 per zone.

190. Most significantly, large water mobilization works will benefit the entire population of each district. In Somaliland, it is expected that 30,000 people will be beneficiaries of the water provision and flood control measures. Similarly, in South Central, over 60,000 people are expected to benefit from water mobilization. Significant short-term employment will also be generated during construction using such schemes as Cash for Work.

191. Finally, women are expected to greatly benefit from project interventions by improving their power and presence in national and community-based decision making. Training programmes and workshops will have at least 30% women. At least one woman per zone will also be supported to represent Somalia in international and regional climate negotiations. Also, at least 1 one women per zone will be supported financially to attend university programmes with updated climate modules.

192. In Component 2, at least 40 women (5 per district) will be included as decision-makers in the District Disaster Management Committees to implement community-based adaptation measures based on gender-sensitive priorities. Furthermore, at least 300 women will be recipients of training on value-chain analysis and marketing, initial capital and assistance with setting up the business.

193. To ensure minimal environmental and social impacts, an Environmental Impact Assessment will be conducted during the first 3 months of the project. Due to the fact that only Somaliland has a legally recognized EIA procedure, an EIA process that is recognized by international standards will be funded by the project. During project development, the project has also been designed to adhere to the UNDP Environmental and Social Screening Procedure. The screening classified the project as Category C (See Annex 9). As such, the following mitigation measures are recommended and will be re-visited at the time of the detailed EIA:

194. Environmental safeguards being applied to the LDCF1 project include the following:

- Conducting in-depth hydro-geotechnical studies to ensure that water mobilisation infrastructure will support sufficient water supply, taking into account storage needs during the dry season and downstream water rights;
- Providing on-the-farm and in-the-pasture training on sustainable adaptation technologies (e.g. equipment/practices which reduce erosion and limit degradation) through Farmer and Pastoral Field Schools;
- Training farmers and pastoralists on the value of ecosystem based services and how adaptation measures such as Soil and Water Conservation measures need to be used to ensure the productivity of ecosystems;
- Training locally based district Disaster Management Committees on drought/flood mitigation and preparedness strategies in order to ensure they can transfer such knowledge to surrounding communities after termination of the project (e.g., how to protect water sources);
- Using native plant species for reforestation/afforestation;

195. Social safeguards being applied include the following:

- Engaging a NGO to do a water / land rights study for the eight districts to ensure that there will not be conflicts over natural resource appropriations;
- Recruiting international experts of Somali origin so they can more freely assist with project implementation;
- Consulting elder leaders, religious leaders and clan leaders while designing and implementing adaptation activities to ensure community approval and ownership;
- Support women based groups to diversify their livelihoods and income services by creating businesses to promote adaptation technologies (e.g., sales of solar pumps);

- Implicating youth by incentivizing them to study fields with climate consideration (e.g., agriculture, civil engineering) and providing them employment after technical capacity building to serve in the understaffed environmentally-related ministries;
  - Increasing the representation of women in decision-making, strategy development and climate negotiations;
  - Accounting for the gender dimensions of climate change in policies and plans to be developed or updated;
- Implementing small-scale, community-based EbA and NRM measures based on priorities identified by women.

### **B.3. Explain how cost-effectiveness is reflected in the project design:**

196. With recently established ministries in all zones of Somalia, capacity building needs are great. By surveying the technical support needs for each zone during the project preparation phase, a set of common specialized technical staff was identified, each with particular skills related to the development of climate change awareness and land-use policies, the effective design and implementation of water mobilization infrastructure and reforestation as well as disaster risk management expertise. Technical experts to be recruited will be expected to build the capacity of the relevant institutions in all zones. With this approach, all zones will benefit from the diverse technical support that will be provided. Further benefits include time saved on HR procurement procedures (e.g. for hiring, advertising etc.) and the ability to compare and standardize support across zones where possible. An example of consolidated training will be group workshops for relevant ministries on how to effectively plan, manage and monitor adaptation projects.

197. Another key design element was to consolidate knowledge-sharing activities and mass awareness campaigns to promote the sharing of information and learning and to encourage discussions of best practices i.e. what works, reasons for failure etc. An example will be to send representatives from all zones on a study tour to another African country where they have successfully implemented a National Climate Change policy. The study tour will promote coherent capacity building so that the zones will work in coordination, be involved in policy development and abide by overarching, centralized policies. Similarly, the National Climate Change Policy will synergize the current patchwork of ad-hoc policies related to the environment across all zones which are in need of being coordinated. Although LDCF funds will be used to address adaptation in the NCC policy, the policy will be able to easily integrate measures to address mitigation in the future.

198. In contrast, according to Stakeholder consultations, separate land use policies were seen to be required per zone due to different land types, climate characteristics and livelihood practices. By taking a zonal approach to land use, each region will be able to more effectively address specific conflicts over natural resources, taking into account local land tenure and water rights. Similarly, separate Climate Monitoring and EWS centres will be developed in Puntland and Somaliland due to the fact that it is not practical to have a centralized centre to coordinate alert dissemination; each zone is secular in terms of communication protocols and it is most cost-effective to use existing alert protocols such as radio, TV emissions.

199. Due to the fact that Somalia has no forecasting capability, LDCF funds will take the first steps in building Climate Monitoring / Early Warning Centres in Somaliland and Puntland (where DRM capacities exist). As an initial step towards building national Early Warning capacity, they will be responsible for disseminating ready-made forecast products (e.g., from FEWSNET, ICPAC, etc) to the communities. In the same way, LDCF funds will steer away from supporting the complex process of equipment procurement and associated training. Instead, the ministries will focus on initially having the technical expertise to be able to maintain and operate any equipment to be procured in the future.

200. Along these lines, university curricula will be updated so that climate change is mainstreamed in existing programmes. Students in each zone will be supported with LDCF funding to attend these updated programmes. The technical graduates will then effectively serve as a pool of qualified, skilled personnel to serve the understaffed ministries. As 73% of the population is under 30 years of age in Somalia and the unemployment rate is approximately 67% (61% among men and 74% among women), this approach will build the technical capacities of the youth so that they can be employed.

201. As stated in Section 2.3, the LDCF1 financed project will build on the existing initiatives and exploit successful approaches such as the Cash for Work scheme commonly used in the PREP programme. In terms of water mobilization and farmer field school strategies, an assessment of other ongoing project activities (EU, FAO) has been undertaken, noting the project site and the success or failure of existing strategies (e.g. water diversions, soil and water conservation techniques etc). Furthermore, as indicated in Table 3, the LDCF1 has evaluated various options for water mobilization. The choice of activities is based on the cost, the existence of expertise already housed within the Ministries and environment limitations (e.g., high evaporation rates). Furthermore, by conducting an initial technical hydro-geological study and engaging a water mobilization expert, proper designs for water mobilization and diversion infrastructure are more likely to be ensured so that financial and human resources will not be wasted. Finally, project costs include funding a Chief Technical Advisor to ensure that design and construction is conducted appropriately throughout the project.

202. LDCF funds will also support training by Agro-Pastoral Field Schools so that practical skills can be transferred into sustainable farming and pastoral applications. Agro-pastoralists require on-the-farm/pasture training using continual mentorship during critical seasons so that sustainable agro-pastoral capacities can be developed over time. Also, lessons-learned from significant initiatives in agro-pastoralism, pastoralism and reforestation must be continually integrated. As a result, the project uses a staggered approach to training over the duration of the project and will provide intensive training sessions for when agro-pastoralists require the most guidance.

203. It was also deemed most cost-effective to support CBOs/NGOs to implement ground-based adaptation measures. Local CBOs/NGOs have demonstrated their ability to train, mobilize and build awareness within their communities and have also taken lead roles in disasters in the past. As noted during stakeholder consultations, the community has considerable confidence in NGOs/CBOs. With more capacity reinforcement, NGOs/CBOs will be the best-placed to assist with the implementation of LDCF activities.

204. Due to project budget limitations, it was necessary to select from the long-list of needs to support agro-pastoral development and livelihood diversification and identify those within the scope and cost-effectiveness of the project. As other projects are addressing land-use management and developing sustainable agro-pastoral and pastoralist practices throughout Somalia, the LDCF1 financed project will build on these projects (as indicated in the discussions in Sections 2.3). The chosen set of activities was reviewed in a Validation Workshop in July 2014 involving all stakeholders. Based on group consensus, Outputs/Activities were revised accordingly. The Outputs outlined have been chosen based on their financial feasibility. They have been chosen over alternative ways to address project barriers, as shown in Table 6 below. A summary of the co-financing strategy, indicating sources, purposes and amounts which will be used to support activity implementation is described in Table 3.

**Table 3: Demonstration of cost-effectiveness for each proposed output indicating the project barrier addressed by each output**

OUTPUTS	Barrier Addressed	Alternatives Considered
<p>1.1 Increased knowledge of national and sub-national institutions in integrated land and water management principles under conditions of climate change and in the ecosystem based approaches to climate adaptation</p>	<p>Limited technical and operational capacities to support adaptation on national and local levels</p> <p>Limited knowledge and capacity to respond to climate change on national and local levels</p>	<p><b>Alternative 1:</b> Provide no support to ministries on effective project management: LDCF funds will be used to reinforce the capacities on the technical aspects of adaptation measures. However, if the ministries have no capacity to manage and monitor CCA programmes, they will not be able to sustain and upscale the programmes. Consequently, if the ministries cannot manage projects properly, they will receive less support for future interventions.</p> <p><b>Alternative 2:</b> Rely on existing academic programmes: Research institutions do not have any climate-focused modules. Consequently, there are no new graduates with relevant technical capacities to support the under-staffed ministries (Agriculture, Environment, Water) with climate related projects.</p>
<p>1.2 Government Departments complete sectoral analyses of climate risks and vulnerability to facilitate mobilization of long-term financing for Climate Change Adaptation</p>	<p>Limited knowledge and capacity to respond to climate change on national and local levels</p> <p>Limited technical and operational capacities to support adaptation on national and local levels</p>	<p><b>Alternative 1:</b> One ministry conducts a climate vulnerability assessment: However, climate change impacts are felt cross-sectorally (across Agriculture, Livestock, Water, Health, Planning etc) and each has specific interests. By promoting ownership to address Climate Change, ministries will gain incentive to find the best proactive measures to address vulnerabilities. They will also coordinate with existing early warning centres ( IGAD ICPAC and FAO SWALIM) to provide the most accurate, targeted weather and climate information for the rural populations.</p> <p><b>Alternative 2:</b> Do nothing. However, there are no existing funds which consider the long-term and which use a transparent, diversified portfolio of financing strategies. Rather, Somalia is at high risk of ad hoc donor initiatives and short-term Government allocation of funds for unsustainable activities can contribute to mal-adaptation (e.g. Charcoal Production).</p>
<p>1.3 Government officials review, revise or draft new policies, regulations and frameworks for the protection, conservation and</p>	<p>Political disintegration/Lack of coordination</p>	<p><b>Alternative 1:</b> Relying on other national policies / strategies to handle climate change: however, with this option, there would be no central mechanism to coordinate climate-related activities and to standardise disaster prevention strategies. Developing a National CC Policy was deemed the best mechanism for streamlining the coordination of CCA/DRM related programmes/projects, as shown in other African countries such as</p>

OUTPUTS	Barrier Addressed	Alternatives Considered
management of land and water ecosystems under conditions of climate change	Absence of and lack of coordination and decentralization among natural resource policies	<p>Zambia.<sup>30</sup> LDCF funds will enhance the capacity of the government to mobilize funds for climate change. Financing for mitigation will be mobilized in the future by the Office of the Prime Minister. Furthermore, having separate climate policies for each zone would be redundant and would only exacerbate the current patchwork of sectoral policies. In order to ensure zonal policies do not conflict with each other (e.g. water and energy, or water and agriculture), a central, prominent national CC policy will have the capacity to identify and resolve the transversal CC issues across Somalia.</p> <p><b>Alternative 2:</b> No Land Use policies: By defining proper land-use plans this will prohibit the current practice of encroaching on grazing lands and cutting forests for charcoal. Stakeholder consultations indicated that land use issues are the underlying cause of the community's vulnerability to climate change. If land use policies are not developed and enforced, conflict over natural resources will continue.</p> <p><b>Alternative 3:</b> Do not have a database and information management system for land-use: however, this would prevent a way to measure to monitor the planned and existing interventions on improving land use sustainability (EU MDG project, UNDP PROSCAL programme). A database enables the easy use of data across agencies as well as the ability to share data regionally and internationally with relevant agencies/organizations (e.g. IGAD) so that lessons learned can be documented about how to reduce natural resource conflict on the basis of sound land tenure decisions.</p>
1.4 National and regional Disaster Risk Management institutions are reinforced to produce early warning products and to disseminate early warnings	<p>Limited climate monitoring and weak disaster risk preparedness capacities</p> <p>Limited technical and operational capacities to support adaptation on national and local levels</p>	<p><b>Alternative 1:</b> No platform to formalize and centralize Climate Monitoring and EWS: this is currently the case in all other EWS and CC-related projects (e.g., SWALIM) which has led to lack of coordination and data sharing among ministries.</p> <p><b>Alternative 2:</b> Enable each information dissemination agency (including donors) to disseminate alerts directly: With this option, there is no central focal point for all NGOs/CBOs to report to for high level questions and to clarify disaster prevention strategies.</p> <p><b>Alternative 3:</b> One-time training for technical staff to save financial resources. However, training needs to be provided each year as more personnel are absorbed. Thanks to mainstreaming CC into university programmes, new staff will continually require capacity building in DRR and Early Warning dissemination.</p> <p><b>Alternative 4:</b> Procure additional monitoring infrastructure to improve EWS/CI, however, there is no meteorological service in any of the zones. LDCF funds will be used to build capacities rather than delivery of hardware. This is because more monitoring</p>

<sup>30</sup> Government of the Republic of Zambia, Ministry of Tourism, the Environment and Natural Resources, *National Climate Change Response Strategy*, December 2010.  
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OUTPUTS	Barrier Addressed	Alternatives Considered
		<p>hardware will not be able to be maintained and operated and it will not improve the lack of warnings produced.</p> <p><b>Alternative 5:</b> Have one Climate Monitoring and EWS Centre: However, due to the political situation, it would not be possible to have a centralized centre which could coordinate alert dissemination. Each zone is secular in terms of communication protocols. Existing protocols (radio, TV emissions) will be exploited and built upon.</p> <p><b>Alternative 6:</b> Develop downscaled forecasts: However, there is no meteorological service in Somalia. As such, no one within the government has the capacity to work with complex forecasting algorithms. In order to produce bulletins, LDCF funds will be used to gradually build the capacity of the Climate Monitoring and EWS centres to be established in Puntland and Somaliland and the Climate Monitoring and EWS focal points within the ministries in South Central. Outside open-source forecasting products, such as NOAA’s CFS forecasting tool will be used until the Climate Monitoring and EWS centres gain sufficient capacity in the years to come. Additionally, regional and international databases (e.g., NOAA’s CFS tools) and regional products from FEWSNET and by IGAD will be exploited.</p>
<p>2.1 Ecosystem-based Adaptation (EbA) plans, Natural Resource Management (NRM) strategies and Integrated Water Management options for critical watersheds, rangelands, agricultural lands and forested areas are developed and piloted jointly by local governments and vulnerable communities at each location</p>	<p>Limited capacities on how to adapt to climate change</p> <p>Unsustainable water and natural resource management practices</p>	<p><b>Alternative 1:</b> Rely on pastoralism rather than develop agro-pastoralism; however, pastoral systems alone would not allow many of the community members, to diversify their livelihoods through improved farming practices. For instance, cultivating diversified fruits/plants provides alternative Income Generating Activities and the means to spread revenues across seasons, providing greater resilience to climate shocks.</p> <p><b>Alternative 2:</b> One-time training to save financial resources: however, farming inexperience and lack of continual mentorship will not enable the initiatives to succeed in the long-run. Agro-pastoralists require on-the-farm/pasture training by facilitators during critical seasons each year so that sustainable agro-pastoral capacities can be developed over time. Also, lessons-learned from significant initiatives in agro-pastoralism, pastoralism and reforestation must be continually integrated.</p> <p><b>Alternative 3:</b> Provide training to Agro-Pastoral Field Schools without grants: The training by the field schools is only a means to the end of transferring practical skills into sustainable farming and pastoral applications. Grants will enable the farmers to have the required tools to multiply the benefits of training. They will have access to capital to put sustainable practices in action, such as soil and water conservation methods.</p> <p><b>Alternative 4:</b> Build ministry capacities without coordination with other initiatives (e.g., EU, AfDB) will lead to redundant activities and a waste of financial resources.</p>



OUTPUTS	Barrier Addressed	Alternatives Considered
<p>2.2 District Disaster Management Committees are established and Disaster Risk Reduction plans are generated to address community vulnerabilities to climatic change and to facilitate response and preparedness plans to reduce identified risks</p>	<p>Limited climate monitoring and weak disaster risk preparedness capacities</p> <p>Limited knowledge and capacity to respond to climate change on national and local levels</p>	<p><b>Alternative 1:</b> Limit DRM training to the national level: through the LDCF financed project, the District Disaster Management Committees as well as the community members will gain expertise in preparing for potential droughts and floods and can more easily transfer best practices to communities.</p> <p><b>Alternative 2:</b> Do nothing: if the districts are not informed on drought/flood preparedness, they will not be able to convey to communities when to prepare for floods and droughts. Through the LDCF financed project, the communities will become empowered to take actions to mitigate floods and cultivate crops in a more drought-resilient manner.</p> <p><b>Alternative 3:</b> Rely on district councils to implement activities rather than community members: however, NGOs and community members have demonstrated their ability to train, mobilize and build awareness within its community. Local NGOs/CBOs have also taken lead roles in disasters in the past. As demonstrated during stakeholder consultations, the community has considerable confidence in NGOs/CBOs. With more capacity reinforcement, NGOs/CBOs will be able to assist with the implementation of LDCF activities as well as scaling-up the project’s activities in adjacent communities after project completion.</p> <p><b>Alternative 4:</b> Focus on CC training for communities rather than DRM: Disasters are tangible and familiar to the Somali communities. Communities are motivated to find means to mitigate the impacts of disasters. Due to the links between DRM and CC, by developing DRM preparedness plans, communities will more effectively build resilience to CC and natural risks.</p>
<p>2.3 Suite of physical techniques and adaptation measures including investment in medium and large-scale water infrastructure, reforestation, flood-control infrastructure, and watershed management developed to improve ecosystem resilience of critical watersheds, rangelands and forested</p>	<p>Unsustainable water and natural resource management practices</p> <p>Limited knowledge and capacity to respond to climate change on national and local levels</p>	<p><b>Alternative 1:</b> If no technical studies are conducted (cost = 0 USD) or not sufficiently informed by hydro-geotechnical experts, it is possible that poor water source locations will be chosen with insufficient capacity and/or poor water quality due to a lack of informed guidance by hydro-geotechnical surveys. Moreover, if water quality samples are not monitored, a baseline of water quality in the regions cannot be established to ensure water quality does not deteriorate.</p> <p><b>Alternative 2:</b> Boreholes (100,000 USD each); Based on Stakeholder consultations and validation workshops, boreholes cause unplanned sedentarization (i.e., sedentism) of pastoralists which will perturb existing socio-economic patterns and cultural traditions. Boreholes have also adversely impacted water quality due to inappropriate siting and difficult operation and maintenance. The Ministries of Water do not have sufficient capacity to perform O&amp;M as evidenced by the fact that 80% of boreholes in Somaliland are not functioning.</p>



OUTPUTS	Barrier Addressed	Alternatives Considered
areas through government support		<p><b>Alternative 3:</b> Berkads (5,000 USD each); although relatively inexpensive, berkads are not viable options due to their high evaporation rates. Also, berkads are privately owned by people who want to sell water as an enterprise.</p> <p><b>Alternative 4:</b> Recharge basins (15,000 USD each); although relatively inexpensive, recharge basins are not viable options due to their high evaporation rates.</p> <p><b>Alternative 5:</b> A gravity-fed hydropower dam is estimated to cost at least 20 M USD. The high cost, local inexperience with the design and need for imported materials make this an infeasible option. Earth micro-dams are the preferred option due to their simple design and low-cost.</p> <p><b>Alternative 6:</b> Have pastoralists rely on natural re-vegetation processes. However, the unsustainable use of natural resources and ecosystems limits their ability to curb the impacts of CC and deforestation. It is therefore essential to preserve and protect the existing vegetation, forests, etc so that they can provide the natural resource base necessary for pastoral livelihoods (e.g., preserving natural forage which feed livestock).</p>
2.4 Support for women’s livelihood diversification with the introduction adaptation technologies aimed to reduce dependence on dwindling natural resources	Limited knowledge and capacity to respond to climate change on national and local levels	<p><b>Alternative 1:</b> No baseline study of market: If the market is not well understood, it is more likely a women’s business venture is likely to fail. The baseline study will enable the best adaptation technology to be chosen so that maximum resources can be used for training and to facilitate the success of using the technology.</p> <p><b>Alternative 2:</b> Loans rather than grants for women entrepreneur groups: however, the women require minimal start-up capital for successful enterprise development. Relative to Somali men, Somali women are the best suited to conduct business ventures because they are settled, closer to markets and can take advantage of their preferred status as borrowers of micro-loan products to continue business interventions.</p>

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

205. The project will be monitored through the following M&E activities. The M&E budget is provided in table 6 below. The M&E framework set out in the Project Results Framework in Part III of this project document is aligned with the AMAT and UNDP M&E frameworks.

206. **Project start:** A Project Inception Workshop will be held within the first 2 months of project start with those with assigned roles in the project organisation structure, UNDP Country Office and, where appropriate/feasible, regional technical policy and program advisors as well as other stakeholders. The Inception Workshop is crucial to building ownership for the project results and to plan the first year annual work plan.

207. The **Inception Workshop** should address a number of key issues including:

208. Assist all partners to fully understand and take ownership of the project. Detail the roles, support services and complementary responsibilities of UNDP CO and Regional Coordinating Unit (RCU) staff (i.e. UNDP-GEF Regional Technical Advisor) vis-à-vis the project team. Discuss the roles, functions, and responsibilities within the project's decision-making structures, including reporting and communication lines, and conflict resolution mechanisms. The Terms of Reference for project staff will be discussed again as needed.

209. Based on the project results framework and the LDCF-related AMAT set out in the Project Results Framework in Section III of the project document, finalise the first annual work plan. Review and agree on the indicators, targets and their means of verification, and recheck assumptions and risks.

210. Provide a detailed overview of reporting, monitoring and evaluation (M&E) requirements. The Monitoring and Evaluation work plan and budget should be agreed and scheduled.

211. Discuss financial reporting procedures and obligations, and arrangements for annual audit.

212. Plan and schedule Steering Committee meetings. Roles and responsibilities of all project organisation structures should be clarified and meetings planned. The first Steering Committee meeting should be held within the first 12 months following the inception workshop.

213. An **Inception Workshop report** is a key reference document and must be prepared and shared with participants to formalise various agreements and plans decided during the meeting.

214. **Baseline:** a baseline study will be conducted during the first year of project implementation to refine the M&E Framework, develop a strong Performance Measurement Framework, collect baseline data regarding selected indicators, and define roles and responsibilities in conducting monitoring activities throughout the lifespan of the project. This study will also lead to the development of a specific M&E Manual.

215. **Quarterly:** Progress made shall be monitored in the UNDP Enhanced Results-Based Management Platform. Based on the initial risk analysis submitted, the risk log will be regularly updated in ATLAS. Risks become critical when the impact and probability are high. Note that for UNDP-GEF projects, all financial risks associated with financial instruments such as revolving funds, micro-finance schemes, or capitalisation of ESCOs are automatically classified as critical on the basis of their innovative nature (high impact and uncertainty due to no previous experience justifies classification as critical).

- Based on the information recorded in Atlas, a Project Progress Reports (PPR) can be generated in the Executive Snapshot.
- Other ATLAS logs will be used to monitor issues, lessons learned. The use of these functions is a key indicator in the UNDP Executive Balanced Scorecard.

216. **Annually:** Annual Project Review/Project Implementation Reports (APR/PIR): This key report is prepared to monitor progress made since project start and in particular for the previous reporting period (30 June to 1 July). The APR/PIR combines both UNDP and GEF reporting requirements.

217. The APR/PIR includes, but is not limited to, reporting on the following:

- Progress made toward project objective and project outcomes - each with indicators, baseline data and end-of-project targets (cumulative)
- Project outputs delivered per project outcome (annual).
- Lesson learned/good practice
- AWP and other expenditure reports
- Risk and adaptive management
- ATLAS QPR

218. **Periodic Monitoring** through site visits: UNDP CO and the UNDP-GEF region-based staff will conduct visits to project sites based on the agreed schedule in the project's Inception Report/Annual Work Plan to assess first hand project progress. Other members of the Project Board may also join these visits. A Field Visit Report/BTOR will be prepared by the CO and UNDP RCU and will be circulated no less than one month after the visit to the project team and Project Board members.

219. **Mid-term of project cycle:** The project will undergo an independent Mid-Term Review at the mid-point of project implementation (expected to be in November 2016). The Mid-Term Review will determine progress being made toward the achievement of outcomes and will identify course correction if needed. It will focus on the effectiveness, efficiency and timeliness of project implementation; will highlight issues requiring decisions and actions; and will present initial lessons learned about project design, implementation and management. Findings of this review will be incorporated as recommendations for enhanced implementation during the final half of the project's term. The organisation, terms of reference and timing of the mid-term review will be decided after consultation between the parties to the project document. The Terms of Reference for this Mid-Term Review will be prepared by the UNDP CO based on guidance from the Regional Coordinating Unit (RCU) and UNDP-GEF. The LD/FC/SCCF AMAT will also be completed during the mid-term evaluation cycle.

220. **End of Project:** An independent Terminal Evaluation will take place three months prior to the final PB meeting and will be undertaken in accordance with UNDP-GEF guidance. The terminal evaluation will focus on the delivery of the project's results as initially planned (and as corrected after the mid-term review, if any such correction took place). The terminal evaluation will look at impact and sustainability of results, including the contribution to capacity development and the achievement of global environmental benefits/goals. The Terms of Reference for this evaluation will be prepared by the UNDP CO based on guidance from the Regional Coordinating Unit and UNDP-GEF. The LD/FC/SCCF AMAT will also be completed during the terminal evaluation cycle. The Terminal Evaluation should also provide recommendations for follow-up activities and requires a management response, which should be uploaded to PIMS and to the UNDP Evaluation Office Evaluation Resource Centre (ERC).

221. **Learning and knowledge-sharing:** Results from the project will be disseminated within and beyond the project intervention zone through existing information sharing networks and forums.

222. The project will identify and participate, as relevant and appropriate, in scientific, policy-based and/or any other networks, which may be of benefit to project implementation though lessons learned. The project will identify, analyse, and share lessons learned that might be beneficial in the design and implementation of similar future projects. There will be a two-way flow of information between this project and other projects of a similar focus.

223. **Audit:** Project will be audited in accordance with UNDP Financial Regulations and Rules and applicable audit policies.

**Table 4: Project Monitoring and Evaluation work plan and budget**

Type of M&E activity	Responsible Parties	Budget US\$ <i>Excluding project team staff time</i>	Time frame
Inception Workshop and Report	<ul style="list-style-type: none"> <li>▪ UNDP Programme Manager</li> <li>▪ PIT (Project Implementation Team)</li> <li>▪ UNDP CO, UNDP GEF</li> </ul>	Indicative cost: 20,000	Within first two months of project start-up.
Baseline analysis	<ul style="list-style-type: none"> <li>▪ Verification of sex-disaggregated baseline values for the indicators in the Results Framework</li> </ul>	Indicative cost: 30,000	Within first three months of project start-up.
Measurement of Means of Verification of project results.	<ul style="list-style-type: none"> <li>▪ UNDP GEF RTA/UNDP CO will oversee the hiring of specific studies and institutions, and delegate responsibilities to relevant team members.</li> <li>▪ PIT, esp. M&amp;E expert</li> </ul>	To be finalized in Inception Phase and Workshop.  Indicative cost is 30,000	Start, mid and end of project (during evaluation cycle) and annually when required.
Measurement of Means of Verification for Project Progress on output and implementation	<ul style="list-style-type: none"> <li>▪ Oversight by UNDP Programme Manager</li> <li>▪ PIT, esp. M&amp;E/KM expert</li> <li>▪ Implementation teams</li> </ul>	To be determined as part of the Annual Work Plan's preparation.  Indicative cost is 40,000	Annually prior to ARR/PIR and to the definition of annual work plans.
ARR/PIR	<ul style="list-style-type: none"> <li>▪ UNDP Programme Manager</li> <li>▪ PIT</li> <li>▪ UNDP CO</li> <li>▪ UNDP RTA</li> </ul>	None	Annually
Periodic status/ progress reports	<ul style="list-style-type: none"> <li>▪ UNDP Programme Manager and team</li> </ul>	None	Quarterly
Mid-Term Review	<ul style="list-style-type: none"> <li>▪ UNDP Programme Manager</li> <li>▪ PIT</li> <li>▪ UNDP CO</li> <li>▪ UNDP RTA</li> <li>▪ External Consultants (i.e. evaluation team)</li> </ul>	Indicative cost: 40,000	At the mid-point of project implementation.
Terminal Evaluation	<ul style="list-style-type: none"> <li>▪ UNDP Programme Manager</li> <li>▪ PIT</li> <li>▪ UNDP CO</li> <li>▪ UNDP RTA</li> <li>▪ External Consultants (i.e. evaluation team)</li> </ul>	Indicative cost : 40,000	At least three months before the end of project implementation.

Type of M&E activity	Responsible Parties	Budget US\$ <i>Excluding project team staff time</i>	Time frame
Audit	<ul style="list-style-type: none"> <li>▪ UNDP CO</li> <li>▪ UNDP Programme Manager</li> <li>▪ PIU</li> </ul>	Indicative cost per year: 5,000 (20,000 total)	Annually
Visits to field sites	<ul style="list-style-type: none"> <li>▪ UNDP CO</li> <li>▪ UNDP RTA(as appropriate)</li> <li>▪ Government representatives</li> </ul>	<p>For GEF-supported projects, paid from IA fees and operational budget.</p> <p>Additional fees of 40,000 included due to security and special charter flight costs</p>	Annually for UNDP CO.
<b>TOTAL indicative COST</b> Excluding project team staff time and UNDP staff and travel expenses		US\$ 260,000 (+/- 5%)	


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

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

NAME	POSITION	MINISTRY	DATE(MM/dd/yyyy)
Ahmed-Mohamed Iman	GEF Operational Focal Point and Director General of Fisheries and Environment	MINISTRY OF NATURAL RESOURCES	5 AUGUST, 2013

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

This request has been prepared in accordance with GEF/LDCF/SCCF/NPIF policies and procedures and meets the GEF/LDCF/SCCF/NPIF criteria for CEO endorsement/approval of project.

Agency Coordinator, Agency Name	Signature	Date (Month, day, year)	Project Contact Person	Telephone	Email Address
Adriana Dinu, Executive Coordinator, UNDP/GEF		Oct. 27, 2014	Tom Twining-Ward	+90 5396532807	tom.twining-ward@undp.org

**ANNEX A: PROJECT RESULTS FRAMEWORK**(either copy and paste here the framework from the Agency document, or provide reference to the page in the project document where the framework could be found).

<b>This project will contribute to achieving the following Country Programme Outcome as defined in CPAP or CPD:</b> CPD Outcome 3: Somali women and men benefit from increased sustainable livelihood opportunities and improved natural resources management					
<b>Country Programme Outcome Indicators:</b> CPD Indicator 3b: Improved natural resource management					
<b>Primary Applicable Key Environment and Sustainable Development Key Result Area (same as that on the cover page, circle one):</b> Promote climate change adaptation					
<b>Applicable GEF Strategic Objective and Program:</b> Climate Change Adaptation Objective 2 “Increase adaptive capacity to respond to the impact of climate change, including variability, at local, national, regional and global level”					
<b>Applicable GEF Expected Outcomes:</b> Outcome 2.1: Increased knowledge and understanding of climate variability and change-induced risks at country level and in targeted vulnerable areas Outcome 2.2: Strengthened adaptive capacity to reduce risks to climate-induced economic losses. Outcome 2.3: Strengthened awareness and ownership of adaptation and climate risk reduction processes at local level Outcome 3.1: Successful demonstration and deployment of relevant adaptation technology in targeted areas					
<b>Applicable GEF Outcome Indicators:</b>					
<ul style="list-style-type: none"> <li>• % of population covered by climate change risk reduction measures</li> </ul>					
	INDICATOR	BASELINE	END OF PROJECT TARGETS	SOURCE OF INFORMATION	RISKS AND ASSUMPTIONS
<b>Project Objective</b> <sup>31</sup> Enhanced resilience and improved adaptive capacity of vulnerable	1. % of men and women in targeted community population with awareness of predicted adverse impacts of climate change and appropriate	1. 70% of the rural populations are pastoralists or farmers. Both livelihoods are vulnerable to climate change impacts, most notably droughts and floods. Scarce water resources, depleted forests and unsustainable natural resource management practices (e.g., charcoal production) are exacerbating the	<u>TARGET 1:</u> 60% of target men and women (approximately 43,000 people) have awareness and knowledge on	1. Socio-economic baseline and final evaluation surveys on climate change awareness amongst target populations	ASSUMPTION: Local communities are incentivized to implement climate resilience-building measures due to sufficient sensitization on climate change impacts.

<sup>31</sup> Objective (Atlas output) monitored quarterly ERBM and annually in APR/PIR.  
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Somali communities in pilot areas, and the ecosystems on which they depend, to the adverse impacts of climate change.	responses (AMAT 2.3.1)	impacts of climate change.  <u>BASELINE 1:</u> Less than 25% of the rural populations have knowledge on how to respond to and prepare for droughts and floods.	adaptation responses to Climate Change <sup>32</sup>		RISK: Water and natural resource management strategies are made ineffective by an unanticipated increase in the frequency of flood events and continued drought which jeopardizes agricultural and pastoral production
	2. Percentage of targeted HHs with enhanced livelihoods through access to water, improved ecosystem services and reforestation (AMAT 1.3.1.1)	<u>BASELINE 2:</u> 0% of the targeted HHs has livelihoods resilient to climate shocks. Livelihoods need to be strengthened by mobilizing water with physical infrastructure for use during the dry season (e.g., earth dams and retention basins, boreholes, etc). Also, livelihoods need to be strengthened with reforestation/afforestation and sustainable land use practices. Farmers and pastoralists need to be provided technical and applied knowledge on soil and water conservation methods and other sustainable practices to ensure that they can continually make use of productive ecosystem services.	<u>TARGET 2:</u> 100% of all targeted 7,200 <sup>33</sup> HHs for all zones have enhanced livelihoods through access to water, improved ecosystem services and reforestation	2. Socio-economic baseline and final evaluation surveys on strengthened livelihoods	RISK: Security risks could affect project implementation, particularly clan-based conflicts over competing uses of natural resources.
<b>Outcome 1:</b> Policies, plans and tools reviewed, revised,	1. Number of Land Use Policies and implementation roadmaps developed that support sustainable Natural Resources	<u>BASELINE 1:</u> Land use policies and proper enforcement mechanisms on land-use do not exist in all zones of Somalia. This has led to conflicts over natural resources and exacerbated tensions between grazing nomadic	<u>TARGET 1:</u> A Land Use Policy in each zone (Somaliland, Puntland and South Central) is developed.	1. Review of the Land Use Policies	ASSUMPTION: There is sufficient political support and capacity (including capacity building activities) within the agencies dealing with adaptation for

<sup>32</sup> Agro-pastoralists and pastoralists will be provided with climate change awareness due to community involvement with construction, infrastructure O&M and working with CBOs.

<sup>33</sup> 1,000 HHs in each target community in South Central will benefit from large-scale water mobilization (4,000 HHs total approximately). 500 HHs per large-scale water mobilization and diversions and 300 HHs per small infrastructure in Somaliland and Puntland target communities (1,600 HHs approximately in both Somaliland and Puntland).



developed, adopted and implemented by government to mainstream and enhance adaptive capacity and mitigate the risks of climate change on vulnerable communities and critical ecosystem services	Management (AMAT 1.1.1)	pastoralists and sedentary agro-pastoralists. Rural populations are also using land in an ad-hoc manner, cutting trees to produce charcoal and encroaching on grazing lands.			successful execution and implementation of the project.  ASSUMPTION: Relevant Ministries have an interest in fully integrating adaptation strategies into their long-term planning.
	2. Number and type of plans and policies in place to address climate risks and include climate-resilient measures (AMAT 1.1.1 and UNDP 2.5.1)	<u>BASELINE 2:</u> Other than the NAPA (2013), there are no policies, strategies or development plans which address how to effectively adapt to climate risks. Policies on the environment and disaster risk management exist, such as the National Policy on Environment in Somaliland and a Disaster Risk Reduction Framework in Puntland, however, none of these address climate risks and includes adaptation measures.	<u>TARGET 2:</u> Development of a gender-sensitive National Disaster Management Policy and at least 3 existing plans/policies are updated to address climate risks	2. Review of the uptake of adaptation measures to climate change in existing plans/policies	ASSUMPTION: The Government of Somalia has sufficient incentive to design funds earmarked to support the environment and climate change that can be effectively targeted towards long-term adaptation-related activities in a transparent manner with appropriate financial management.
	3. Type and level of development frameworks that include specific budgets for adaptation actions (AMAT 1.1.1.1)	<u>BASELINE 3:</u> With the New Deal Compact, Somalia has received over USD 50 million in donor support to address NRM issues through projects such as EU's MDG project, PREP, PROSCAL and FAO SWALIM programmes. However, these projects/programmes have a limited duration (on average 4 years). With climate change proven to worsen in the decades to come, national and regional governments require mobilization of long-term financing. Financing must be earmarked for adaptation measures across sectors to target capacity building, activities,	<u>TARGET 3:</u> Development of the National Climate Change Policy including a fund mobilization strategy to raise public and private financing earmarked for climate change adaptation in all zones	3. National Climate Change Policy and accounting records on financing earmarked for adaptation	RISK: A low level of cooperation between executing institutions due to political divisions and the existence of three distinct zones of Federal Somalia, Puntland and Somaliland makes the coordination of policy development challenging.  RISK: The project could encounter delays due to the

		projects or programmes that build resilience to climate change.			lack of nationally-available expertise and human resources  RISK: Limited climate monitoring inhibits forecasting capabilities and the ability to develop detailed spatial mapping to allow for adequate adaptation and risk reduction planning
<b>Outcome 2</b>  Models of community and ecosystem resilience developed and implemented in pilot areas selected in consultation with government and community stakeholders	1. Number and type of physical livelihood assets constructed to reduce the impacts of floods and droughts (AMAT 1.2.1.8)	<u>BASELINE 1:</u> The rural populations are at extreme risk because they do not have sufficient water for drinking and irrigation. They are also subject to loss of crops and livestock due to the fact that the most fertile areas are within or adjacent to wadis which are susceptible to flash flooding. Moreover, during the high rainy periods, runoff cannot be effectively stored for use during the dry season. Therefore, there is a need to construct physical infrastructure to mobilize surface water and groundwater.	<u>TARGET 1:</u> Design and construction of 2 50,000 m3 earth dams in Puntland and Somaliland, rehabilitation of 4 dams in South Central, 6, 5 and 8 water diversions constructed in Puntland, Somaliland and South Central respectively, rehabilitation of 4 canals in South Central and rehabilitation of 4 boreholes in South Central	1. Construction log of the Ministries of Water, Agriculture and the Environment	ASSUMPTION: Initial hydrogeological studies and technical assessments are accurate in their predictions of water capture and storage capacities.  ASSUMPTION: Local populations, including nomadic pastoralists, will not trespass into protected reforestation and re-vegetation areas due to being informed of the purpose of these areas to restore the natural environment and reduce erosion  RISK: Water ministries have limited capacity to design, construct and perform maintenance on
	2. Number of hectares of land reforested and managed sustainably	<u>BASELINE 2:</u> Due to poor natural resource management and significant tree removal for charcoal production,	<u>TARGET 2:</u> 200 ha reforested in each	2. Reforestation/ Afforestation records kept by the	

	under a conservation scheme (AMAT 2.3.1.1, UNDP SP Outcome 1, Indicator 5)	agro-pastoralists and pastoralists are losing their forests. Consequently, agro-pastoralists do not have sustainable livelihoods and the region is subject to significant erosion and climate change impacts.	zone	Ministries of Agriculture and the Environment	water mobilization infrastructure  RISK: There is insufficient technical and operational capacity within the regional governments to coordinate drought and flood preparedness and to implement unfamiliar Ecosystem-based Adaptation actions
	3. Number of farmers and pastoralists in the target districts participating in Agro-Pastoral Field Schools (disaggregated by gender) (AMAT 2.2.1.1)	<u>BASELINE 3:</u> The agro-pastoral communities have no capacity to produce diversified crops and develop more sustainable agro-pastoral and pastoral practices (e.g. using soil and water conservation methods, producing drought-tolerant forage).  The pastoralists in each region have had no capacity reinforcement on soil conservation measures, re-seeding, veterinary medicine and animal hygiene to ensure more sustainable pastoralist practices.	<u>TARGET 3:</u> 16 Agro-Pastoral Field Schools (APFS) established (2 in each district) with 200 direct beneficiaries per APFS (30% women)	3. Farmer Field School and Pastoral Field School training logs	RISK: The lack of politically recognized Environmental Impact Assessment procedures causes unforeseen adverse social/environmental impacts such as downstream impacts due to water mobilization and retention infrastructure
	4. Number of community driven plans that explicitly address disaster and climate risk management and equity / gender considerations which include Monitoring and Evaluation mechanisms (AMAT 2.2.1 and UNDP SP 5.2.1)	4. There are no district level, or community level, disaster management capacities. If early warning information is provided to communities, it is usually passed on in a very ad-hoc, uncoordinated manner by leaders to others through SMS or word of mouth.  <u>BASELINE 4:</u> Disaster Management Committees are required to be developed in each district. The DMCs must be tasked with preparing targeted, community-based, gender-	<u>TARGET 4:</u> One (1) gender-sensitive plan developed by each District Disaster Management Committee to be created (with women representation) in the eight target districts (8 plans total)	4a. Conventions signed, confirming creation of District Disaster Management Committees  4b. Review of the DRM plans of the District Disaster Management Committees	RISK: Targeted farmers and pastoralists are skeptical and unwilling to use adaptation technologies / practices so as to diversify their livelihoods and/or income diversification strategies do not significantly increase household incomes

		sensitive disaster preparedness plans to mitigate the impacts of droughts and floods.			
	5. Number of individuals trained in adaptation technologies in order to establish women-based marketing businesses for the technologies (AMAT 3.2.1.1)	<p>BASELINE 5: Currently, women are particularly vulnerable to climate shocks due to their dependence on natural resources. Women require awareness and training on available adaptation technologies which will enable them to build resilience to climate change (e.g., water harvesting buckets, solar water pumps, drip irrigation systems).</p> <p>Women are more often than men involved in operating small businesses due to their entrepreneurial spirit as well as for historical and cultural reasons (e.g., Somali women are responsible for working on farms.) Women are thus best placed to pilot and market adaptation technologies.</p>	5. 300 women trained in adaptation technologies as a foundation for starting sustainable technology marketing enterprises	5. Baseline and final survey of women-based groups which are promoting adaptation technologies	

**ANNEX C: STATUS OF IMPLEMENTATION OF PROJECT PREPARATION ACTIVITIES AND THE USE OF FUNDS<sup>34</sup>**

**A. DESCRIBE FINDINGS THAT MIGHT AFFECT THE PROJECT DESIGN OR ANY CONCERNS ON PROJECT IMPLEMENTATION, IF ANY:**

Project design will be updated based on the hydro-geotechnical studies and the Environmental Impact Assessment to be conducted in the first 6 months of the project. As outlined in the risks section, the project could encounter delays due to the lack of nationally-available expertise and human resources. To mitigate this implementation risk, the project will establish a database of national and international experts able and willing to provide technical support to the project – for instance, to assist with infiltration gallery design and construction. When expertise is not available nationally, regional and international experts will be recruited. Close linkages with co-financing partners and baseline projects will also ensure the availability of technical expertise.

Another design and implementation risk is that water management strategies could be made ineffective by an unanticipated increase in the frequency of flood events and continued drought. To mitigate this risk, diversified and secured access to water resources, combining both surface and ground water, as well as the implementation of adapted cultivation techniques of forage and other crop varieties, will be used. Furthermore, investments will be selected and designed using a community participatory process, thereby allowing local knowledge of climate risks to be incorporated into project design.

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

<b>PPG Grant Approved at PIF: 200,000</b>			
<b>Project Preparation Activities implemented</b>	<b>Budgeted Amount</b>	<b>Amount Spent To date</b>	<b>Amount Committed</b>
Local Consultants	37,500	30,784	6,716
International Consultants	55,200	48,908	6,292
Travel	35,000	34,326	674
Technical workshops	52,500	27,162	25,338
Supplies / printing	9,800	-	9,800
Consultancy	-	-	-
Service Contracts - Individuals	-	-	-
Bank Charges	-	-	-
Sundry	10,000	3,154	6,846
Learning - training of counterparts	-	-	-
Services - Companies (committed but not paid)	-	-	-
Nex Advance (not liquidated)	-	-	-
<b>Total</b>	<b>200,000</b>	<b>144,334</b>	<b>55,666</b>

<sup>34</sup> If at CEO Endorsement, the PPG activities have not been completed and there is a balance of unspent fund, Agencies can continue undertake the activities up to one year of project start. No later than one year from start of project implementation, Agencies should report this table to the GEF Secretariat on the completion of PPG activities and the amount spent for the activities.

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

Provide a calendar of expected reflows to the GEF/LDCF/SCCF/NPIF Trust Fund or to your Agency (and/or revolving fund that will be set up)

Not applicable.



## United Nations Development Programme

Country: Somalia

### PROJECT DOCUMENT<sup>1</sup>

#### **Project Title: Enhancing Climate Resilience of the Vulnerable Communities and Ecosystems in Somalia**

**New Deal Compact Peace and State Building Goal 4, Priority 3:** Promote the sustainable development and management of natural resources by developing legal and regulatory frameworks and building capacity in key natural resource management institutions

**Peace and State Building Goal 4, Priority 5 (Somaliland):** Develop and implement a comprehensive and integrated environmental management strategy that addresses desertification, promotes alternatives to charcoal as an energy source and protects land, water, forest and coastal resources

#### **UNDP Strategic Plan (2014-2017) Environment and Sustainable Development Primary Outcome:**

Countries are able to reduce the likelihood of conflict, and lower the risk of natural disasters, including from climate change;

#### **UNDP Strategic Plan (2014-2017) Secondary Outcome:**

Growth and development are inclusive and sustainable, incorporating productive capacities that create employment and livelihoods for the poor and excluded;

**Expected CP Outcome 3 (2011-2015):** Somali women and men benefit from increased sustainable livelihood opportunities and improved natural resources management.

**Expected CPAP Output:** Somalia is a non-CPAP country.

#### **Executing Entity/Implementing Partner:**

United Nations Development Programme

#### **Implementing Entity/Responsible Partners:**

Office of the GEF Focal Point, Ministry of Petroleum, Minerals and Environment (Federal Focal Point)

Ministry of Environment and Rural Development (Somaliland)

Ministry of Environment, Wildlife and Tourism (Puntland)

United Nations Development Programme

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<sup>1</sup>For UNDP-supported, GEF-funded projects as this includes GEF-specific requirements.

### Brief Description

Approximately 70% of Somalis are dependent on climate-sensitive agriculture and pastoralism. As floods and droughts become more severe and frequent in Somalia, there is a need to find approaches that can reduce the sensitivity of farmers and pastoralists to increasing rainfall variability. With natural resource degradation also rampant throughout Somalia, most notably for the production of charcoal, Somalia is becoming increasingly vulnerable to conflicts over scarce resources. Climate change and resource scarcity are exacerbated by the absence of policies on land-use and disaster risk management at the national level. At local levels, communities lack the financial, technical and informational resources needed to build their resilience to climate change as well as the knowledge of how to prepare for extreme weather impacts. To address these issues, LDCF financing will be used to support ministries, districts, NGOs/CBOs to integrate climate change risks in Natural Resource Management and disaster preparedness. Climate risk management will be institutionalized from national to local levels. CBOs will be revitalized to take the lead on implementing community-based Ecosystem-based flood preparedness and other adaptation measures. To support community-led activities, water will be captured using small scale infrastructure and flood impacts will be reduced with water diversion techniques and reforestation. With 73% of the population under 30 years of age, youth will be sensitised with climate change knowledge so that they can serve understaffed ministries and support CBO efforts on-the-ground. Furthermore, the project will empower women to market and to scale-up distribution of adaptation technologies, providing women an improved asset base. With such activities aimed to support resilience to climate change, in conjunction with other on-going initiatives of relevance outlined in this project document, LDCF resources are expected to also build governing and planning capacities at the national and district levels and to enhance the adaptive capacity of vulnerable populations throughout Somalia.

Programme Period:	2014-2018
Atlas Award ID:	00077821
Project ID:	00091197
PIMS ID:	5268
Start date:	November 2014
End Date:	November 2018
Management Arrangements	DIM
PAC Meeting Date	

Total resources required	\$ 72,820,000
Total allocated resources:	\$ 72,820,000
• GEF/LDCF	\$ 8,000,000
• Government (In-kind)	\$ 8,000,000
• UNDP (Cash)	\$ 10,500,000
• UNDP/PROSCAL (Grant)	\$ 12,320,000
• EU (Grant)	\$ 34,000,000

Agreed by (Government):

Date/Month/Year

Agreed by (UNDP):

Date/Month/Year



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## List of Acronyms

ADESO	African Development Solutions
AfDB	African Development Bank
APFS	Agro-Pastoral Field School
CBO	Community-Based Organization
CCA	Climate Change Adaptation
CCD	United Nations Convention to Combat Desertification in Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa
CM/EWS	Climate Monitoring / Early Warning System
CTA	Chief Technical Advisor
DDMC	District Disaster Management Committee
DRM	Disaster Risk Management
DRR	Disaster Risk Reduction
EA	Executing agency
EbA	Ecosystem-based Adaptation
EIA	Environmental Impact Assessment
EU	European Union
EWS	Early Warning System
FAO	Food and Agriculture Organisation
FEM	Global Environment Facility (GEF)
FGS	Federal Government of Somalia
GDP	Gross Domestic Product
GEF	Global Environment Facility
HADMA	Humanitarian Affairs and Disaster Management Authority
IA	Implementing Agency
IC	International Consultant
ICPAC	Inter-Governmental Authority on Development Climate Predictions and Assessments Centre
IGA	Income Generating Activity
IGAD	Inter-Governmental Authority on Development
INC	Initial National Communication
IPCC	Intergovernmental Panel on Climate Change
IWRM	Integrated Water Resources Management
LDCF	Least Developed Countries Fund
M&E	Monitoring and Evaluation
MDGs	Millennium Development Goals
MF	Microfinance
MPME	Ministry of Petroleum, Minerals and Environment
NAPA	National Adaptation Programme of Action
NCC	National Climate Change
NERAD	National Environment Research and Disaster Preparedness and Management Authority

NRM	Natural Resource Management
NGO	Non-Governmental Organisation
OCHA	UN Office for the Coordination of Humanitarian Affairs
PIT	Project Implementation Team
PM	Project Manager
PSC	Project Steering Committee
RC	Regional Committee
SDMA	Somali Disaster Management Authority
SMART	Specific, Measurable, Achievable, Relevant and Time-bound
TC	Technical Committee
ToR	Terms of Reference
UN	United Nations
UNDAF	United Nations Development Assistance Framework
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nations Children's Fund
WB	World Bank

## 1 SITUATION ANALYSIS

1. Presently, 70% of the Somali population is engaged in agro-pastoralism, pastoralism, subsistence agriculture, and charcoal production as livelihood options.<sup>2</sup> All of these livelihoods are heavily reliant on the natural resource base and provision of ecosystem services. However, in spite of land resources being the direct source of livelihood for the majority of Somalia's population, land is being continually degraded. Ecosystem services are under serious threat from a combination of deforestation due to charcoal production as well as unsustainable natural resource management practices which is contributing to loss of soil fertility, vegetation and grazing land.

2. Ecosystem services in Somalia are furthermore aggravated by extreme weather and climate change impacts, most notably increasing spatial and temporal variability of the rainy and dry seasons, floods and droughts. According to the World Bank's Natural Hotspots Study<sup>3</sup>, 43% of Somalia's land area is exposed to flooding and droughts which entails that 54% of the population is highly exposed to extreme weather and natural risks. Officially, Somalia ranks 15<sup>th</sup> on the DFID list among the developing countries at high disaster risk.<sup>4</sup>

3. Somalia's socio-economic vulnerability to natural risks is clear; the 2011 drought resulted in 260,000 deaths in Somalia.<sup>5</sup> In the past decade, droughts have rendered 870,000 people food insecure and an additional 2.3 million - one fourth of the population - vulnerable to food insecurity.<sup>5</sup> Displaced by conflict and famine, over one million Somalis live as refugees in the Horn of Africa and Yemen and 1.1 million remain inside Somalia as internally displaced persons (IDPs).<sup>5</sup> Women in rural areas have been identified as one of the most vulnerable groups to climate change impacts in Somalia due to unequal access to both material and natural resources.<sup>6</sup>

4. Similarly, pastoralists are highly vulnerable because they are dependent upon rain-fed rangeland grazing for their livestock and tend to have very few fixed assets.<sup>6</sup> Somalia's Arid and Semi-Arid Lands (ASALs), which make up more than 80% of the country's landmass and house the greatest national proportion of pastoralists in Africa,<sup>6</sup> are particularly vulnerable to extreme weather conditions.<sup>7</sup> With livestock contributing approximately 40% to Somalia's GDP and accounting for more than 50% of export earnings,<sup>5</sup> Somali's economy is sensitive to climate change impacts. In the case of Puntland where 90% of the rural populations are pastoralists, Puntland's economy is losing at least USD 15m annually as a result of losses in the condition and services of ecosystems and their lack of resilience to extreme weather and climate change impacts.<sup>8</sup> Such a downward trend in the economy will undoubtedly make Somalia even more disadvantaged. Already, the multi-dimensional poverty index (MPI) ranks Somalia 94 out of 104 countries and Somalia's rural and nomadic poverty rates are 94% and 99% respectively.<sup>9</sup>

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<sup>2</sup> UN and World Bank. 2006: Somali Joint Needs Assessment: Productive Sectors and Environment Cluster Report.

<sup>3</sup> Natural Hotspots Study: A Global Risks Analysis (Disaster Risk Management Series No. 5, World Bank, 2005)

<sup>4</sup> UK Department for International Development, 2006. Reducing the Risk of Disasters – Helping to Achieve Sustainable Poverty Reduction in a Vulnerable World

<sup>5</sup> World Bank Interim Strategy Note 2014-2016 (WB 2013)

<sup>6</sup> Somalia Ministry of National Resources 2013. National Adaptation Programme of Action on Climate Change for Somalia (NAPA 2013)

<sup>7</sup> According to predictions by the IGAD Climate Prediction and Application Centre, 2013

<sup>8</sup> African Development Solutions, Care International, and the Ministry of Environment, Puntland. Dec 2013, *Your Environment, Your Life, Baseline Survey report for Puntland on Natural Resources Management*

<sup>9</sup> African Research Initiative for Somalia 2013, Country Report on the Millennium Development Goals (MDG Report)

## 1.1 Problem Declaration

5. To escape an inevitable fall into extreme poverty, Somalia's farmers and pastoralists urgently require resiliency to the impacts of climate change including extreme weather conditions. They require knowledge on the means to more sustainably manage their limited natural resources base. Currently, the concentration of population and economic activity is located in flood-prone areas and in conflict-ridden areas in which climate-induced resource scarcity could escalate violence and political instability. Much of the country in the North is arid and semi-desert making it relatively unproductive for agriculture, with nomadic pastoralism the only potential livelihood option.

6. To support sustainable land management and preparedness for natural risks, climate risk management must be institutionalized from national to local levels in Somalia. At the national level, the environment, water, agriculture and livestock ministries require significant technical and operational capacity reinforcement to support their mandates. After 20 years of civil strife, ministries and institutions are weak and there is little coordination at a policy or regulatory level.

7. From a programme perspective, there is currently no knowledge or practical experience on planning and implementing practices that advance climate resilient development. Existing plans and strategies do not consider the risks associated with climate change and there are no modalities to facilitate such transformational change in development planning. The broad absence of (or very weak) governance structures, particularly on decentralized levels, has allowed civil society to take on many roles of the government, particularly in Federal Somalia, generally in an ad-hoc and uncoordinated manner.

8. From a policy perspective, there are no legal means to promote and enforce sustainable natural resource practices. There are different environment related policies in place (e.g., the National Policy on Environment in Somaliland and a Disaster Risk Reduction Framework in Puntland). Despite their operationalization, the policies have remained largely inadequate in establishing an enabling environment for institutional capacity development which would promote sustainable natural resource management, disaster preparedness and simultaneously facilitate poverty reduction.<sup>10</sup> Ministries simply do not have the capacity to formulate appropriate, relevant policies. For instance, there are currently no policies for sustainable forest management, watershed management and land-use management.

9. Inappropriate or absent regulation is reflected in the unsustainable Natural Resources Management (NRM) and rangelands that threaten the livestock trade. In fact, land issues and conflicts between farmers and pastoralists are common due to the lack of policies on land tenure and water rights.<sup>10</sup> Most critically, in the absence of effective strategies to link NRM with livelihood generation and job creation, Somalia's interlinked crises of unemployed youth, forced displacement, contested land, drought and natural resource depletion presents a risk to Somalia's peaceful development.<sup>10</sup>

10. Exacerbating the lack of governance are severe constraints in financial resources which can support qualified technical personnel. Trained technical personnel often leave ministries to join international NGOs or leave Somalia for more lucrative positions abroad.<sup>11</sup> Consequently, the government lacks technical capacities to manage water resources effectively; e.g. hydrologists and meteorologists. Lack of borehole maintenance and inappropriate borehole design has resulted in low water tables and poor groundwater quality.<sup>10</sup>

11. The lack of manpower to support environmental management conflicts with the fact that, at present, Somalia has 73 percent of its population below the age of 30, the highest in the country's history. Youth often have a stronger awareness of environmental issues and a greater stake in long-term sustainability, particularly as agents of change.<sup>12</sup> Nevertheless, there is no long-term strategy to

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<sup>10</sup> African Research Initiative for Somalia 2013, Country Report on the Millennium Development Goals (MDG Report)

<sup>11</sup> Somalia Ministry of National Resources 2013. National Adaptation Programme of Action on Climate Change for Somalia (NAPA 2013)

<sup>12</sup> UNDP 2012. Somalia Human Development Report 2012: Empowering Youth for Peace and Development

train the youth to be the next workforce to improve natural resource management. Consequently, many young people are trapped in an environment of violence, fear, unemployment and poverty. Experiences from Somalia and elsewhere show that when large numbers of young people are jobless and have few opportunities for positive engagement, they become a ready pool of recruits for extremists (e.g., al Shabaab).

12. Similar to the limited budget for technical personnel, the proportion of budget allocated to conservation expenditure and adaptation actions is also negligible. Most government budget lines are used to support short-term priorities such as drilling boreholes when shallow wells (berkads) become dry. Consequently, farmer and pastoralist communities in the regions of highest rainfall variability largely depend on humanitarian aid to buffer risks during drought periods (such as during the drought of 2011).

13. On the local level, proactive, community-based natural resource management and disaster preparedness is limited. Communities lack knowledge of effective rainwater harvesting techniques and are unable to efficiently capture and store runoff during heavy rains for use during the dry season.<sup>13</sup> A small number of villages capture and store rainwater, but this is not done systematically. Water sources and reservoirs have also deteriorated from silting due to weak community and government level management. Furthermore, rural communities are also unable to practice sustainable rangeland/pasture management so as to ensure sufficient food and fodder supplies during periods of drought.

14. Marginalization of the women and youth is furthermore exacerbating the potential to use natural resources sustainably in Somalia. Women in rural areas are identified as one of the most vulnerable groups in Somalia. Within the female headed household, women are obliged to grow food, to gather fuel and water, to cook, and to rear children.<sup>14</sup> The gender based division of labour, unequal access to both material and non-material resources and women's diminished participation in decision-making in both political and private domains generally result in increased vulnerability of women to the impacts of climate change. In Somalia, women are found to be responsible for finding solutions to feed their families during crisis situations. Gender inequality is alarmingly high at 0.776 out of a value of 1 (complete inequality), with Somalia at the fourth lowest position globally on the Gender Inequality Index (GII) if internationally comparable data were available.<sup>15</sup>

15. Exacerbating the adverse impacts of unsustainable land and water management on communities and women is the fact that the government lacks hydro-meteorological infrastructure to monitor and assess the weather, the climate and water levels so as to forewarn Somalis of impending natural disasters. The situation is dire for Federal Somalia because no hydro-meteorological stations exist to assist in generating weather warnings. Consequently, limited drought and flood warnings are communicated to rural populations.

16. It is predicted that extreme weather risks are expected to increase in Somalia. Climate change prediction analyses have been derived from the FAO Somalia Water and Land Information Monitoring (SWALIM, 2002-2012) programme database, the NAPA (through the support of the IGAD Climate Predictions and Assessments Centre, ICPAC) as well as from neighbouring countries in the Greater Horn of Africa (GHA) region. Based on the IPCC Global Climate Models (GCMs) and the new generation of the Earth System Models (ESMs) from the Fifth Phase of Coupled Model Inter-comparison Project (CMIP5) and Regional Climate Models (RCMs), the most recent global projections show that Somalia is expected to experience a steady future increase in temperature, rising to 3.2 °C by 2080.<sup>16</sup> A gradual increase in total rainfall is expected in Somalia with increasing

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<sup>13</sup> Somalia Ministry of National Resources 2013. National Adaptation Programme of Action on Climate Change for Somalia (NAPA 2013)

<sup>14</sup> African Research Initiative for Somalia 2013, Country Report on the Millennium Development Goals (MDG Report)

<sup>15</sup> UNDP 2012. Somalia Human Development Report 2012: Empowering Youth for Peace and Development

<sup>16</sup> Somalia Ministry of National Resources 2013. National Adaptation Programme of Action on Climate Change for Somalia (NAPA 2013)



seasonal variability as well as an increase in the frequency and severity of future droughts and flash flood events.<sup>16</sup>

17. Without any intervention, management and planning to address the aforementioned problems related to land/water use management and flood/drought preparedness, particularly for the long-term, will become more challenging. Climate change will invariably act like a threat multiplier that will most severely impact the rural populations dependent on climate-sensitive agriculture and pastoralism in Somalia. With a population growth rate of at least 2.3%,<sup>17</sup> vulnerabilities will only be exacerbated by the rural populations' pre-existing problems such as conflict, poverty and unequal access to scarce resources.

## 1.2 Preferred Solution

18. By addressing climate change and helping people to adapt to climate variability, the proposed project is intended to provide the basis from which other development and peace building endeavours can build upon.

19. Based on addressing the problem aforementioned, the preferred (normative) solution in Somalia is to reinforce the technical and operational capacities of national and local government officials as well as communities and CBOs to sustainably manage natural resources and build climate resilient livelihoods which can successfully exploit thriving ecosystem services in the long-term.

20. Using LDCF funds, sustainable land and water use, taking full account of climate change risks, will be guided by appropriate policies and regulations at the appropriate ministries. The planning agencies in each of the zones of Somaliland, Puntland and South Central (i.e., Federal Somalia) will be targeted to enhance and enforce sustainable and climate resilient natural resource development, through enhanced land-use planning and budgeting practices. At the same time, the recruitment potential and human resource capacities of environmentally-focused ministries will be improved, including by enhancing their financial independence. Mainstreaming climate change into university curricula will provide a pool of technical graduates who can improve the staffing capacity of relevant ministries (e.g., agriculture, water, etc).

21. Simultaneously, communities will be provided awareness and training to use sustainable, climate resilient agro-pastoral practices and to have integrated climate and disaster preparedness capacities. To accomplish this, initially, access to safe water will be supported. Subsequently, capacities will be reinforced for decentralized district councils, traditional stakeholders, like elders and village councils to promote Natural Resource Management, Disaster Risk Reduction and to place importance on improving ecosystem-based services. CBOs will be revitalized to implement adaptation activities related to integrated land and water management. Ultimately, to enforce sustainability and up-scaling of project activities, financing will be mobilized from domestic and external public and private sources to fund sectoral climate priorities.

22. Based on this solution, innovative aspects which the proposed project will deliver include:

- Developing climate sensitive land use policies for all zones in Somalia
- Developing a National Climate Change Policy to guide the selection of prioritised adaptation options and fund mobilization to upscale adaptation interventions and find parallel financing for mitigation in the future
- Developing a gender-sensitive, federal Disaster Risk Reduction policy and creating Climate Monitoring / Early Warning System centres in Somaliland and Puntland
- Supporting Agro-Pastoral Field Schools to build rural capacities to have improved climate change sensitive farm and pastoral practices through a learning-by-doing training approach

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<sup>17</sup> Verner, Dorte, 2012. *Adaptation to a Changing Climate in the Arab Countries*, MENA Development Report, The World Bank



- Creating a District-based Disaster Management Committees who will be responsible for preparing and implementing targeted, disaster preparedness plans in response to expected climate change
- Research and piloting of drought resistant varieties for crops, trees and fodder grasses using experimental or quasi experimental design principles in monitoring and evaluation
- Supporting the diversification of women's livelihoods by building their capacities to use and sell adaptation technologies
- Increasing employment opportunities for youth by building their technical expertise in climate change to support understaffed ministries

### **1.3 Barriers facing the project**

This normative solution is hindered by a number of institutional, financial, technological and informational barriers including:

#### *1.3.1 Political disintegration/Lack of coordination*

23. Political divisions, particularly the existence of the three distinct regions or zones of South Central (i.e., Federal Somalia), Puntland and Somaliland make the implementation of national programs challenging. The NAPA 2013 was one of the first national level plans to be formulated. A lack of strong coordination mechanisms (both at the federal and regional levels) currently exists in order to maximize climate change adaptation gains from the ongoing and planned national initiatives, action plans, policies, programmes and projects.

#### *1.3.2 Absence of and lack of coordination and decentralization among natural resource policies*

24. Somalia lacks both macro policies as well as regional and/or micro policies for the various socio-economic sectors which promote effective action toward sustainable water and land use. For example, an absence of land planning policies has led to the privatization of rangelands and unplanned urbanization. Similarly, limited laws on natural resource protection has led to the burning of forests and uprooting of mature trees for charcoal production. In fact, of the zones in Somalia, only Somaliland has enacted an Environmental Impact Assessment policy. Inadequate land classification systems and land-use planning has caused clan conflicts over scarce natural resources including water, forests and rangelands.

25. Similarly, current policies also demonstrate an absence of climate change mainstreaming, and consideration of the impacts of future climate change on various socio-economic sectors. This has prevented an integrated, cross-sectoral and long-term approach to decision-making and planning.

26. Existing policies which exist within the environmentally-related ministries are focused on food security, water, environmental management and conservation. However, agriculture programs are generally separated from environmental, water and energy programs in spite of the fact that issues such as food security are transversal<sup>18</sup>

27. Furthermore, there is no formalized scheme to decentralize policy enactment so that they can be enforced effectively on the ground. A lack of rural development coordination bodies and farmer/pastoralist advocacy groups has blocked community awareness on existing policies.<sup>19</sup> Rural populations rarely profit from and abide by the existing environmentally-related policies and regulations because they are unaware of their existence (e.g., the National Policy on Environment in Somaliland and a Disaster Risk Reduction Framework in Puntland).

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<sup>18</sup> UNDP Somaliland Environment Paper, ver 4 (2012)

<sup>19</sup> UNDP Somaliland Environment Paper, ver 4 (2012)

### *1.3.3 Limited technical and operational capacities to support adaptation on national levels*

28. As a country that has been plagued by two decades of conflict, Somalia has limited qualified technical personnel who can help to respond to and cope with natural disasters and long-term environmental change. In fact there is no staffing strategy to fill important governmental positions due to a lack of financial planning and a lack of skilled man-power.<sup>20</sup> According to Stakeholder consultations, the ministries lack the ability to budget and plan for long-term issues such as climate change. Another constraint in providing skilled staff is that universities do not offer any specialized trainings or degrees related to the environment. The concept of climate change is essentially absent from formal educational institutions at all levels from primary to higher education. Consequently, there is a large shortage of trained staff and training institutions that have experience and knowledge on the natural environment and predicted impacts of climate change.

### *1.3.4 Limited knowledge and capacity to respond to climate change on national and local levels*

29. Communities and government stakeholders are well aware that climate change is affecting the environment and the ecosystems services that it provides. However, there is a notable lack of awareness, planning and concrete actions to specifically address the impacts of climate change so as to improve ecosystem services. National and district government officials do not have in-depth knowledge of climate variability and consequently have not put in place supportive development plans to bolster adaptive capacity. Ecosystem-based Adaptation (EbA) plans, Natural Resource Management (NRM) strategies and Integrated Water Resources Management options for critical watersheds, rangelands, agricultural lands and forested areas are entirely absent. Information, education and communication campaigns for stakeholders on how to manage risks due to climate change and climate variability are required to be developed and disseminated.

### *1.3.5 Unsustainable water and natural resource management practices*

30. Up until now, watersheds have been managed without consideration of long-term impacts. There is a shortage of technical knowledge and capacity to apply groundwater capture and surface water mobilisation techniques in Somalia. The Water Departments have constructed numerous boreholes which have insufficient capacity and/or poor water quality. The institutions relevant to water management are also unable to capture wadis' periodic flows and store water for the dry seasons, such as by using rainwater harvesting techniques.

31. As a result of poor surface and groundwater mobilisation, agro-pastoral practices are underdeveloped in the context of emerging climate pressures, characterised by poor productivity, limited options for forage growth to absorb shocks during severe drought periods, and lack of diversification of produce to spread risks across seasons. Farmers have been applying traditional methods and lack the technical capacity and know-how to implement ecosystem-based adaptation approaches. For example, presently, seeds are provided by Ministry of Agriculture in Somaliland, but no drought-resistant breeds have been introduced according to the agro-pastoralists that were interviewed during the NAPA process in 2012. The adaptive and management capacity of pastoral and agro-pastoral communities to avert severe feed shortages through reseedling or establishment of improved pastures is generally limited. There is also a need to enhance agricultural production through conservation measures aimed at reducing degradation, nutrient depletion, soil erosion, salinization and desertification. Agro-pastoralists are also not familiar with how technologies can help increase productivity and build resilience to climate change (e.g. using rainwater harvesting to mitigate the impacts of drought). Strategies are lacking for appropriate post-harvest storage of crop residues to create strategic reserves as a mitigation measure.

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<sup>20</sup> African Development Solutions, Care International, and the Ministry of Environment, Puntland. Dec 2013, *Your Environment, Your Life, Baseline Survey report for Puntland on Natural Resources Management*

32. The practice of tree removal for grazing and charcoal production is further compounding productivity problems; deforestation is severe as evidenced by an 18.5% decrease in land area covered by forest between 1990 and 2010.<sup>21</sup> Consequently, the impacts of flash floods, such as soil erosion, are becoming more severe. The impacts of land degradation on the ecosystem services are significant and include loss of animal/plant products, food and livelihood security, soil cover, regulation of water, and biodiversity. Present initiatives used to promote sustainable land management practices are scattered and insufficient.

### *1.3.6 Limited climate monitoring and weak disaster risk preparedness capacities*

33. The prolonged civil war in Somalia saw the collapse of the climate monitoring network, hence, little postwar data is available, with mainly pre-war data for the period 1963 to 1990. There is a gap of years with no data, making accurate trend analysis for climate change in Somalia difficult. For the past 5 years, the FAO SWALIM, IGAD ICPAC and USAID's FEWSNET initiatives have focused on improving regional forecasting for Somalia, making use of the rehabilitated network of monitoring stations in addition to stations abroad (Kenya, Djibouti). However, the agencies involved with Disaster Risk Management (DRM) have not effectively exploited forecasting knowledge from these initiatives to be able to interpret forecasting data autonomously. In fact, the centralized agency for DRM in South Central has only been functional for one year, so there is no national meteorological agency responsible for forecasting. Consequently, the country lacks the capacity to forecast potential threats of large-scale disasters and has little preparedness for extreme weather.

34. Furthermore, technical and operational disaster risk reduction capacities are extremely weak in all zones of Somalia. Knowledge on disaster preparedness and management is minimal for all relevant DRM institutions from the national level down to district level outlets. No studies have been conducted to identify hotspots of vulnerability to be able to accurately prepare communities with adaptation and disaster risk reduction strategies. If early warning information is provided to communities, it is usually passed on in a very ad-hoc, uncoordinated manner by leaders to others through text messages or word of mouth. With no formalized early warning system and no district level disaster management plans in place, communities are rarely forewarned about and prepared for extreme events.

35. At present, communities protect flood prone areas through embankments (using sacks of mud). Construction of Gabions using stones and wire meshed to prevent flooding of farms and houses takes place in some flood plain areas (supported by UNDP and International Labour Organisation). However, in general flood preparedness is weak. For example, in 2008, the Burao district in Somaliland reported that 27% of the settlements in the district were affected by unforeseen floods which caused significant displacement of people and loss of livestock.

### *1.3.7 Limited national financing and ad hoc, uncoordinated donor responses for long-term climate change adaptation measures*

36. Faced with a range of pressing development challenges, notably extreme poverty and malnutrition, the Government's financial resources are insufficient to fully address long-term systemic problems such as infrastructure investment for water management, diversification of agro-pastoralist systems, or analysing potential future climate change impacts. For instance, in Puntland a monthly government allocation of USD 3000 for the Ministry on the Environment is by far inadequate to smoothly run the entire ministry. Consequently, the proportion of budget allocated to conservation expenditure is negligible. Exacerbating the poverty and climate-related problems is that there are limited funds at the national level to support adaptation actions. Most government budget lines are used to support short-term priorities such as drilling boreholes when shallow wells (berkads) become dry.

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<sup>21</sup> African Research Initiative for Somalia 2013, Country Report on the Millennium Development Goals (MDG Report)

37. Furthermore, Somalia relies heavily upon international aid. With the New Deal Compact, Somalia has received over USD 50 million in donor support to address NRM issues such as the EU, PREP, PROSCAL and FAO SWALIM programmes. However, these projects/programmes have a limited duration (on average 4 years). With climate change expected to worsen in the decades to come, national and regional governments require mobilization of long-term financing. The financing must be earmarked for adaptation measures across sectors to target activities, projects or programmes that build resilience to climate change. However, the current aid projects/programmes lack central coordination and, as a consequence, suffers from fragmented delivery and reduced effectiveness in the long-term.

### *1.3.8 Limited socio-economic development and diversification of livelihoods to build resilience to climate change for women*

38. Women in rural areas are identified as one of the most vulnerable groups in Somalia. Within the female headed household, women are obliged to grow food, to gather fuel and water, to cook, and to rear children.<sup>22</sup> The sexual division of labour, unequal access to both material and non-material resources and women's diminished participation in decision-making in both political and private domains generally result in increased vulnerability of women to the impacts of climate change.

39. To promote the importance of women's roles in society and reduce their dependency on dwindling natural resources, Somali women require a diversified asset base. Somalia is particular because women are more often than men, involved in operating small businesses and commonly act as entrepreneurs due to a variety of historical and cultural reasons. For instance, rural women are responsible for working on farms, so are thus well placed to test and sell appropriate farm technologies (e.g., rainwater harvesting tanks). However, women require capacity building to undertake revenue-generating activities. They have no knowledge of marketing and how to create sustainable businesses so as to create a source of renewable capital to diversify their livelihoods and build resilience to climate change.

## **2 STRATEGY**

40. No single initiative can completely remove all of the aforementioned barriers. Nonetheless, this project (hereafter referred to as the LDCF1 project<sup>23</sup>) will work in conjunction with other adaptation and mitigation-related initiatives to build off of their advances in removing these barriers.

41. The LDCF1 project aims to address the above barriers by achieving the following two outcomes:

42. Outcome 1: policies, plans and tools reviewed, revised, developed, adopted and implemented by the government to mainstream and enhance the adaptive capacity of vulnerable communities and mitigate the risks of CC on vulnerable communities and critical ecosystem services.

43. Outcome 2: models of community and ecosystem resilience developed and implemented in pilot areas selected in consultation with government and community stakeholders.

### **2.1 Project rationale and policy conformity**

44. The project idea and expected outcomes are firmly embedded in the recommendations made in Somalia's National Adaptation Programme of Action (NAPA 2013).<sup>24</sup> The previous Transitional

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<sup>22</sup> African Research Initiative for Somalia 2013, Country Report on the Millennium Development Goals (MDG Report)

<sup>23</sup> As this is Somalia's first LDCF financed project, it will be simply referred to as the LDCF1 project.

<sup>24</sup> Somalia Ministry of National Resources 2013. National Adaptation Programme of Action on Climate Change for Somalia (NAPA 2013). The NAPA document for Somalia can be downloaded from the UNFCCC website, [http://unfccc.int/adaptation/workstreams/national\\_adaptation\\_programmes\\_of\\_action/items/4585.php](http://unfccc.int/adaptation/workstreams/national_adaptation_programmes_of_action/items/4585.php)

Federal Government took some of the first important steps to bring Somalia in line with global efforts to address environmental issues through ratifying the United Nations Framework Convention on Climate Change in December 2009, the Convention on Biodiversity in December 2009 and the Kyoto Protocol in October 2010.

45. Somalia also developed and submitted its National Adaptation Programme of Action (NAPA) in 2013 and is entitled to benefit from the LDC Fund for the implementation of priority measures identified in its NAPA as a non-Annex 1 Party. The NAPA was developed according to the guidelines set out by the UNFCCC in decision 28/CP.7.

46. The **National Adaptation Programme of Action** (NAPA, 2013) was based on a broad consultative process at all levels, from government authorities to vulnerable communities, including priority stakeholders and the most vulnerable segments of the population. Consensus on adaptation priorities identified three programme areas – sustainable land management, water resources management and disaster management. The overarching goal of the NAPA is to make the Somali people more resilient to climate change, recognizing their high vulnerability in an economy that is dominated by subsistence agriculture and livestock rearing and undermined by the heterogeneity of clan-based conflicts.

47. The main objectives identified in the NAPA 2013 will be addressed by the LDCF1 project. These include:

- Build community awareness on climate change
- Increase monitoring and risk forecasting capacities
- Support the adoption of government policies and strategies to improve resilience to climate risks among vulnerable population groups (including women and children) and economic sectors

48. The LDCF1 project addresses the top 4 NAPA priority measures including:

- 1) Land management with emphasis on preventing deforestation, increasing trees plantations, improving rangelands and ecological zones, establishing regulations for rotational grazing and protection and supervision of grazing areas.
- 2) Increasing the quantity of water available through rehabilitation of dams, ‘berkads’, boreholes and the construction of new dams, reservoirs, water diversions, livestock watering points and irrigation infrastructure. The selection of sites for these boreholes should take into account livestock concentration in the area and should be accompanied by an Environmental Impact Assessment.
- 3) Strengthening the National-level disaster management agency responsible for coordination during emergencies, developing early warning systems and developing drought management and emergency preparedness plans.
- 4) Construction of river embankments, check dams and retaining walls to protect flood-prone areas

49. LDCF resources will be used for the development of activities supporting Disaster Risk Reduction and Management in line with Somalia’s 3rd NAPA priority listed above. The consultative process conducted by the NAPA concluded that adaptation measures should “reduce the risks among vulnerable populations from natural disasters [using] prevention measures able to support the development and implementation of an early warning system.” Establishment of early warning systems is essential for drought and food insecurity.

50. The LDCF1 project addresses the following NAPA recommendations:

- Policy and Planning - Strengthening the National Disaster Risk Management Authority with a preventive as well as responsive remit
- Climate Risk Planning and Management - Community level mapping of high vulnerability areas to risks of drought and flooding, dust storms and strong winds, and integration into local disaster risk management plans and responses.



- Institutional Development - Promoting National Disaster Management Authority (NDMA)-led coordination and disaster risk management and climate risk reduction with key ministries and at a district level, including early warning response; and building capacities at the district level to enable building of community level awareness, disaster preparedness and response capacity.

51. In addition to supporting NAPA priorities, the project is in line with a number of Government policies and strategies, as outlined in Table 1. Along with the recently developed NAPA, development of the LDCF financed project is timely because Somalia has started the NAP process to address land degradation and is in the process of formulating its first Initial National Communication to the UNFCCC with the assistance of UNEP to be delivered between 2015 and 2016. With the assistance of FAO, Somalia is also developing the National Biodiversity Strategy and Action Plan (NBSAP).

52. The proposed project relates to and will contribute towards Somalia's National Adaptation Plan (NAP) process by implementing activities in line with the recommendations of NAP. The proposed project is focused on building resilience by addressing policy and institutional issues as well as building capacities for local actions. Specifically, the project will have a strong synergy with the NAP process for desertification. Somalia is part of a regional project supporting 20 GEF Eligible Parties to align their National Action Programs and Reporting Processes with the UNCCD (UNEP). The regional project goal is to contribute to better targeted investments in Desertification Land Degradation and Drought (DLDD). The LDCF1 project will complement the NAP process by taking concrete actions (such as reforestation) to combat land degradation. Also, the development of Land Use Policies will create a legal framework to support sustainable land management practices. Furthermore, the LDCF1 project will contribute data (such as baseline DLDD information) into any NAP monitoring and assessment systems and any future dryland strategies.

53. Furthermore, the project supports 4 of the 9 **Millennium Development Goals (MDGs)**, namely:

- MDG1: Eradicate Extreme Poverty and Hunger
- MDG3: Promote Gender Equality and Empower Women
- MDG7: Ensure Environmental Sustainability
- MDG8: Develop a Global Partnership for Development

54. Specifically, the project supports the MDGs in terms of aiming to reduce poverty by enabling the rural and nomadic populations (of which more than 90% live in poverty<sup>25</sup>) to: i) take preventive actions when weather or climate-induced risks are forecasted and ii) have access to diversified livelihoods and capital to facilitate risk reduction.

55. All components of the project adhere to UNDP's **Strategic Plan (SP, 2014-2017)** for developing countries which emphasize support for sustainable development pathways. The SP stresses reinforcing planning, policy frameworks and institutional capacities to support actions on climate change as well as reinforcing effective maintenance and protection of natural capital.

56. The project is similarly aligned with UNDP's **Country Programme Document (CPD) for Somalia (2011-2015)**. This project is aligned with the CPD outcome 3 on "Somali Women and Men benefit from increased sustainable livelihoods opportunities and improved natural resources management."

57. Finally, the proposed project is also closely aligned with the **UNDP Somalia Gender Equality and Women's Empowerment Strategy 2011 – 2015** and **UNDP's Gender Equality Strategy (GES) 2014 – 2017**.<sup>26</sup> The Gender Strategy describes how the UNDP Country Office will establish a system to integrate gender equality and women's empowerment in its policies, operations

<sup>25</sup> African Research Initiative for Somalia 2013, Country Report on the Millennium Development Goals (MDG Report)

<sup>26</sup> UNDP. 2012. Gender Mainstreaming Made Easy: Handbook for programme staff. UNDP Gender Equality Strategy (2014 – 2017), <http://www.undp.org/content/dam/undp/library/gender/GenderEqualityStrategy2014-17.pdf>

and programming. The strategy outlines a four-pronged approach: 1) mainstreaming Gender Equality and Women's Empowerment (GEWE) outputs and indicators under Outcomes 1, 2, and 3 of the Country Programme Document (see above); 2) Undertaking specific interventions to support GEWE through Outcome 4: Somali women and men attain greater gender equality and are empowered; 3) Mainstreaming gender equality considerations in all institutional and organizational practices; and 4) Developing strategic partnerships in implementing gender-responsive interventions. Similarly, the project is also aligned with Outcome 5 of UNDP's GES by supporting Somalia to reduce the likelihood of conflict and lower the risk of natural disasters, including from climate change. Furthermore, the UNDP Country Office, whilst striving to promote more gender transformative programming, supports the goal of targeting 30% of beneficiaries to be women and has provided guidance on empowering gender in Somalia.<sup>27</sup>

### **LDCF conformity**

This project is fully consistent with LDCF objectives and priorities:

58. Component 1 of the project is in line with LDCF/SCCF Focal Area Objective 1 by reducing the vulnerability of communities to the adverse impact of Climate Change. Component 2 of this project support LDCF/SCCF Area Objective 3 by promoting the transfer and adoption of adaptation technologies. The technologies to be adopted in this project include adaptation technologies/packages to increase the productivity of farmers and pastoralists (Component 2).

59. Component 2 of this project supports LDCF/SCCF Area Objective 2 by increasing the adaptive capacity to respond to the impacts of climate change, including variability, at local and regional levels.

60. Moreover, Outcomes 1 and 2 of this project are aligned with the GEF/LDCF Portfolio Level Outcome/Output, "Capacity development at the local level to implement climate-related disaster prevention measures."

### **GEF conformity**

61. The project has been designed to meet overall GEF requirements in terms of design and implementation:

Sustainability: The project has been designed to be sustainable at village, district and at national levels by building capacity at all levels. It will support CBOs to assist with NRM-focused activity implementation and it will establish district-based Disaster Management Committees to be responsible for disaster preparedness and climate change adaptation at the local level. The project will furthermore provide educational scholarships to technical students to study NRM principles in their respective fields of discipline so that they can serve as skilled recruits for the understaffed ministries.

Monitoring and Evaluation: The project is accompanied by an effective M&E framework which will enable on-going adaptive management of the project, ensuring that lessons are learnt, management decisions are taken based on relevant and up-to-date information, and regular progress reports are available for concerned parties. The implementation of the project's activities will reflect UNDP-GEF monitoring and evaluation standards and procedures, in line with the requirements of the LDCF.

Replicability: Great attention has been paid in the project design to ensure that lessons are replicable, sufficient training builds the capacity to transfer expertise to other initiatives, and that necessary replication mechanisms are in place. Agro-Pastoral Field Schools will be established to demonstrate

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<sup>27</sup> UNDP Gender in Somalia. 2013, [http://arabstates.undp.org/content/dam/rbas/doc/Women's%20Empowerment/Gender\\_Somalia.pdf](http://arabstates.undp.org/content/dam/rbas/doc/Women's%20Empowerment/Gender_Somalia.pdf)

best land and water use practices. Similarly, the water diversion and mobilization techniques chosen can be easily transferred to other parts of the country and supported by Cash for Work. Women entrepreneurial groups will also be supported to market gender-appropriate adaptation technologies so that such technologies can easily be adopted throughout the rural regions of Somalia.

**Stakeholder involvement:** Following on from the recent NAPA process of 2013, the design of this project has been undertaken in a participatory manner. All relevant agencies involved with supporting rural community adaptation and disaster risk preparedness have been consulted and will be implicated during project implementation. Universities will also be important actors in implementation to build the capacities of the youth in Natural Resource Management across multiple sectors (agriculture, water, etc). Finally, various active NGOs/CSOs such as Candlelight and the Somali Women Association have been consulted and will continue to have important roles in the project.

**Multi-disciplinary approach:** the project will undertake a number of activities to ensure all relevant Ministries and NGOs/CBOs are fully engaged, have capacities built and can contribute to the sustainability of activities.

**Gender equality:** the project outcomes will contribute to increasing women’s presence and voices in climate change adaptation decision-making and strategy development. In the long run, this will have a multiplier effect in contributing to increasing women’s participation in decision-making and public life. Component 2 also includes an output which is aimed to strengthen women’s livelihood diversification by enabling them to market adaptation technologies and increase their asset base.

**Complementary approach:** In order to build upon existing plans and avoid the duplication of efforts, the project will work in conjunction with relevant on-going projects in Somalia and will build on similar initiatives for each project component (see Section 2.3.1).

62. The proposed project has been prepared fully in line with guidance provided by GEF and the LDCF Trust Fund. The project follows the guidance from the ‘Programming Paper for Funding the Implementation of NAPAs under the LDC Trust Fund’ (GEF/LDCF 2006). The project focus is also aligned with the scope of expected interventions as articulated in the LDCF programming paper and decision 5/CP.9. As climate impacts fall disproportionately on the poor, the project recognizes the links between adaptation and poverty reduction (GEF/C.28/18, 1(b), 29). The project has been endorsed by the national UNFCCC and GEF focal points in Somalia.

Table 1: Relevant policies, regulations, plans and strategies for the LDCF1 project

<b>Policy, Regulation, Strategy Plan</b>
National Adaptation Programme of Action (2013)
Provisional Constitution, Article 25 on Environment (2012)
Somali New Deal Compact <sup>28</sup> , Priority 3 for the Peace and State Building Goal 4 (PSG4) of the New Deal for Puntland and South Central as well as Priority 5 for Somaliland (2013)
Somalia’s Six Pillar Policy (2012)
Somalia’s Economic Recovery Plan (2014-2015)
Changwon Initiative on the prevention and control of desertification, land degradation and drought (2011)
First Initial Communication (in progress)
National Action Plan (NAP) (in progress)
Somaliland’s Vision 2030
Somaliland National Development Plan (2012-2016)
Somaliland’s Policy of Disaster Risk Management (2008)
Somaliland Environment Strategic Plan and National Environment Policy (2011-2015)

<sup>28</sup> <http://www.pbsdialogue.org/The%20Somali%20Compact.pdf>



Somaliland Constitution: Article 18: The Environment and the Relief of Disaster
Somaliland Directorate of Environment and Pastoral Development (DoEPD) Strategic Plan (2011 – 2015)
Somaliland National Environment Research and Disaster-preparedness (NERAD) Agency Law – Law No: 35 of 2006
Somaliland Law on the Prevention of Deforestation & Desertification (Law N: 04/1998)
Somaliland National Water Policy (2004) and Puntland Water Acts (2004)
5 Year Strategic Plan of Puntland State (2014 – 2018)
Puntland Master plan for all Livelihood Sectors (2015 – 2030)
Puntland Disaster Management Framework (2011)
UN Somali Assistance Strategy (2011)
UNDP Gender Equality Strategy (2014 – 2017)
UNDP Strategic Plan, CPD Outcome 3 (2011-2015)
CPAP Output 2 (2011 – 2015)
UNDP Somalia Gender Equality and Women’s Empowerment Strategy (2011 – 2015)

## 2.2 Country ownership: country drivenness and country eligibility

63. As part of the official "Roadmap for the End of Transition", a political process which provided clear benchmarks leading toward the formation of permanent democratic institutions in Somalia, the Transitional Federal Government's interim mandate ended on 20 August 2012. The Federal Parliament of Somalia was concurrently inaugurated, ushering in the Federal Government of Somalia (FGS), the first permanent central government in the country since the start of the civil war in 1991. The national constitution was adopted in August 2012, under which Somalia is now officially known as the Federal Republic of Somalia.

64. The new constitution places strong emphasis on environment, land rights and natural resources. Article 25 states that *“Every person has the right to an environment that is not harmful to their health and well-being, and to be protected from pollution and harmful materials”* and also states *“Every person has the right to have a share of the natural resources of the country, whilst being protected from excessive and damaging exploitation of these natural resources”*. The constitution also commits the Federal Government to develop a national land policy that ensures equity in land allocation and a regulatory environment for the land sector. Article 45 of the Constitution is focused specifically on the environment and issues for overarching decrees. These include the following: 1) the government shall give priority to protection and preservation of biodiversity and ecosystems; 2) all people have a duty to safeguard the environment; 3) the federal government and member states should address the existing issues of hazardous waste, desertification, deforestation and environmental degradation; and 4) the Federal Government shall adopt general environmental policies for the Federal Republic of Somalia.

65. Similarly, in Somaliland, the Constitution enshrines matters that relate to the environment and natural resource management in Article 18 of the Constitution as a responsibility of the state: *“The state shall give a special priority to the protection and safeguarding of the environment, which is essential for the well-being of the society, and to the care of the natural resources.”*

66. The Constitution of the State of Puntland is the governing document and legal framework for the Puntland State of Somalia. It is the supreme law documenting the duties, powers, structure and fashion of the Government of Puntland, subject however to Somalia’s federal Constitution. The Puntland constitution enshrines matters that relate to natural resource management and environmental protection in Articles 48 and 49 respectively. Article 49: Protection of the Environment states that: *“It is the responsibility of the Puntland State and of all its inhabitants to restore and protect the environment.”* The constitution specially prohibits desertification, pollution, export of charcoal, export of female livestock and wildlife and unplanned settlements. The Constitution also states that legislation for environmental protection shall be approved by the House of Representatives.

67. In October 2012, the new President of Somalia released a document entitled the ‘Six Pillar Policy’ briefly outlining the intentions of how Somalia will be improved under the new government – essentially a set of government objectives. The document conveys three specific intentions related to the environment, which are as follows:

- Enact laws that preserve and protect the environment;
- Incorporate environmental education in the formal and informal education systems in the country;
- Rectify the environmental damage of the past such as deforestation and cleaning of Somali seas.

68. Another key policy for the proposed project is the Somali New Deal Compact (2013) which is a living document that reflects the ongoing process of transition and defines priority interventions to ensure the country stays on the path to long-term peace and state building. The Compact translates the Six Pillar Policy into highly selective political, security, and development priorities for the next three years (2014-2016) based on a set of Peacebuilding and State-building Goals. The priorities are framed by the five Peacebuilding and State building Goals (PSGs) of the New Deal and represent agreement on what is required to move towards peace and recovery. Under PSG4 for Economic Foundations, priority three directly calls for Natural Resource Management. Specifically, it aims to “promote the sustainable development and management of natural resources by developing legal and regulatory frameworks and building capacity in key Natural Resources Management (NRM) institutions.

69. The Compact further recognizes the role women have played and will continue to play in community mobilization and peace-building in Somali society. The Compact also makes gender a cross-cutting priority, requiring all key interventions to ensure equitable participation of women (and other marginalized groups) and to respond directly to the acute challenges contributing to sustained gender disparities across multiple sectors.

70. The LDCF financed project is closely aligned with the Somali Compact, in particular Priority 3 for the Peace and State Building Goal 4 (PSG4) of the New Deal for Puntland and South Central as well as Priority 5 for Somaliland. This priority aims to “*promote the sustainable development and management of natural resources by developing legal and regulatory frameworks and building capacity in key Natural Resources Management (NRM) institutions.*” Priority 5: Develop and implement a comprehensive and integrated environmental management strategy that addresses desertification, promotes alternatives to charcoal as an energy source, and protects land, water, forest and coastal resources.

71. These priorities recognize that the country’s natural resource base is the backbone of the economy and could be a driver of conflict and increased vulnerability, both economically and politically, at local and regional levels. The Somali Compact states that both legal and regulatory frameworks should be set up to a) ensure sustainable environmental and natural resource management; b) develop technical options for natural resource revenue-sharing; c) and to build the capacity of key natural resource management institutions. Milestones anticipated on the basis of the Compact include the following:

(Federal Somalia):

- A draft proposal for a country-specific legal and regulatory framework for natural resource management prepared and presented to the parliament by 2014.

(Somaliland):

- The 2011-2015 Environment Strategic Plan and National Environment Policy programs initiated by mid- 2014
- Building on the 2004 Somaliland Water Policy and Strategy

72. The preparation of the Compact included a diagnostic of the binding constraints to stability and development in order to prioritize only those activities that were critical. Donors endorsed the Compact at the Brussels Conference, pledging US\$2.4 billion and committing to align their programmes with its priorities.

73. Based on the Compact, the FGS and development partners agreed to establish a new aid framework - the Somalia Development and Reconstruction Facility (SDRF). The framework acts as a

centre-piece of the New Deal partnership in order to enhance the delivery of effective assistance to all Somalis. Closely aligned with the Somalia Compact principles, the SDRF will serve as a mechanism for the FGS to oversee and guide the diverse activities of its development partners and provides a single governance platform for coordinating international assistance with Compact priorities delivered through windows administered by technical agencies.

74. The Compact was developed to facilitate a partnership for more international assistance in alignment with Somaliland's Vision 2030. Somaliland's Vision 2030 sets out a roadmap to i) enable Somaliland to take ownership of its development agenda; ii) inspire Somaliland and its leadership to mobilise resources and overcome development challenges to attain a higher standard of living; iii) guide development partners to align their assistance with Somaliland's priorities and aspirations; iv) provide a framework upon which Somaliland's strategies and implementation plans will be anchored.

75. In order to make progress towards the Vision 2030, a five year National Development Plan for Somaliland for the period 2012-2016 was developed through consultations across different stakeholder groups, including government and non-state actors, central and regional actors. The overall objective of the plan is to address and overcome the structural and institutional development constraints which Somaliland faces, and to achieve social and economic transformation towards the attainment of national prosperity. The pillars of Somaliland's National Development Plan correspond to the five Peace and State building Goals (PSGs) of the New Deal. The plan is built on five main pillars: Economic, Infrastructure, Governance, Social and Environment. Sectoral plans are listed in the policy that will be referred to when selecting and designing the recommendations. Under the Environment Pillar of the plan, the following relevant activities are emphasized:

- Improvement of rangeland utilization and environmental conservation
- Empowerment of rural communities to look after their environment
- Registration of land and adoption of appropriate land tenure systems
- Conservation of soil and water
- Reforestation
- Rehabilitation of degraded areas
- Development of strategies for disaster preparedness and management
- Formulation of appropriate environmental policies
- Building the institutional capacity of Ministry of Environment and Rural Development.

76. Similar to Somaliland, the Puntland region has begun its second 5-year development plan. The policy states its long-term goal to '*Conserve nature and protect the environment for the present and future generations; encourage sustainable environmental and natural resource management for equitable growth and development, poverty reduction, and enhanced livelihoods.*' Puntland's key environmental issues include the depletion of water resources, rangeland degradation and desertification, overuse of woodland resources and marine products, declining numbers of wildlife species and poor sanitation and waste management.

77. Puntland also has a Youth Policy which has the strategic objectives of enhancing environmental knowledge and awareness among young Puntlanders and encouraging the active involvement and leadership by young people in environmental initiatives.

78. The government of Somaliland also established the Policy of Disaster Risk Management in 2008. This policy aims at addressing the increasing incidences and emergencies of both slow and rapid on-set disasters, which result in serious human disaster and suffering, destruction of property and infrastructure, disruption of the environment and overall welfare of the society. The policy has four main areas for intervention which include: 1) Preparedness, Prevention and Mitigation; 2) Food Reserve; 3) The Disaster Fund; and 4) Strategic Stockpiles.

79. The project is also aligned with Somalia's recent Economic Recovery Plan (2014 – 2015). The plan is based on macroeconomic management, infrastructure rehabilitation and equitable access to services. In alignment with the LDCF1 project, it emphasizes developing productive infrastructure such as crops, livestock and forestry.

### 2.2.1 *Baseline studies and needs assessments*

80. After the 2010/11 drought that affected the Horn of Africa and considering the high cost of financing emergency operations through 2011 and 2012 in the Horn, many donors have moved their focus of attention toward preparedness and resilience. Various studies and needs assessments have been produced which act as the basis for the choice of activities in the proposed project. Influential studies include: i) the Natural Resources Management baseline survey report for Puntland, a baseline survey report commissioned by African Development Solutions, Care International and the Ministry of Environment, Puntland, ii) two baseline analyses on pastoral livelihood in the North of Somalia, the 2011 Nugal Pastoral Livelihood Zone Baseline Report<sup>29</sup> and the Pastoral Livelihood Baseline Analysis for the Sool Plateau<sup>30</sup> were produced by the Food Security and Nutrition Analysis Unit of Somalia (FSNAU) in 2011, iii) the Land Degradation Assessment by FAO, iv) Candlelight studies (“Impact of CC on Pastoral Societies of Somaliland”, “Impact of CC on Agro-pastoralism in Somaliland” and a study on coastal areas entitled “Climate Change Stole our Mist”) and v) the Somaliland DRM Capacity Needs Assessment.

81. In general, these studies conclude that Somali men and women have extremely limited capacity to prepare for climate extremes which is severely compromising their livelihoods. Women are more adversely impacted due to their dependence on natural resources that are threatened by climate change and the fact that they are often excluded from decision-making processes on the use, management and protection of natural resources on national and community levels. The socio-economic and political constraints faced by women limits their coping capacity. All environmentally-related institutions require adaptation knowledge and policies must be developed to enforce Disaster Risk Management and sustainable land use. Such conclusions and more detailed recommendations from these studies have been integrated into the activity choice and implementation plan of this project.

## 2.3 Design principles and strategic considerations

### 2.3.1 *Baseline projects and financing*

82. The LDCF financed project<sup>31</sup> (i.e., the LDCF1 project) will complement other on-going and planned adaptation-related projects listed below. Details on how LDCF funds will be used to build off and complement the baseline projects are included in the boxed text below the project descriptions.

83. ***The New Deal Compact*** (*Government co-financing through Federal and Regional Level Plans - USD 8,000,000*): On the 30th of November 2011, at the 4th High Level Forum on Aid Effectiveness, the New Deal for Engagement in Fragile States (“The New Deal”) developed through the forum of the International Dialogue for Peace-building and State-building was presented and widely endorsed. While bilateral and multilateral agencies in Somalia have been providing humanitarian support, the New Deal calls for a shift for support to be provided by international organizations for long-term development needs. During the consultative process leading to the Compact, the FGS and development partners made specific reference to the lack of environmental protection and lack of coping capacities to respond to climate change and how these constrain and negatively impact the development of the primary production sectors, namely agriculture, livestock, fisheries and infrastructure.

84. The LDCF-funded project will ensure that projects are in-line with the key objectives of the New Deal and other relevant zonal plans. For example, stemming from the New Deal, the Somaliland government developed a ***National Development Plan (NDP)*** for 2012-2016 for which it employs its own funds and seek development assistance from donors for implementation. The plan includes sectors, namely, environment, rural development, agriculture, livestock and disasters management,

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<sup>29</sup> FSNAU <http://www.fsnau.org/downloads/Nugal-Pastoral-Baseline-Profile-September-2011.pdf>

<sup>30</sup> <http://www.fsnau.org/downloads/Sool-Plateau-Pastoral-Livelihood-Zone-Baseline-Profile-August-2011.pdf>

<sup>31</sup> As this is Somalia’s first LDCF financed project, it will be simply referred to as the LDCF1 project.

that are directly linked to the LDCF1 project. The NDP allocates USD 36.92m for the Environment and Rural Development sector and USD 5.92m for Disaster Preparedness and Management. Similarly, Puntland has completed its 5 year Development Plan and Federal Somalia is in the process of preparing a national development budget.

85. LDCF1 project outputs will directly support the goals stated in the zonal development plans and will have specific activities aligned with the federal-level plan. Most notably, the infrastructure and grazing restoration activities identified during project development were prioritized by the Ministry of Environment and will address part of the unfunded required actions by the NDP.

LDCF funds will be used to enhance the New Deal initiatives and zonal development plans by developing policies for sustainable climate resilient land-use plans and reinforcing the appropriate institutions to enforce climate sensitive environmental management practices. The proposed project will also support Somalia's core productive livelihoods, agriculture and pastoralism by providing farmers and pastoralists capacity reinforcement on best practices for sustainable Natural Resource Management in the context of emerging climate change risks.

86. ***UN Joint Programme for Sustainable Charcoal Production and Alternative Livelihoods (PROSCAL)*** (2013-2015, co-financing USD 12,320,000): The UN Joint Charcoal Reduction Programme (CRP) is in response to the UN Security Council resolution 2036 (2012) that seeks international cooperation to ban illegal exports of charcoal from Somalia. The successful implementation of the Joint Programme will contribute towards the protection of Somali natural resources endowments, which is critical to ensure the livelihoods of the large pastoral/agro-pastoral Somali population. The specific objectives of the programme are: 1) Support Somalia as well as countries in the Horn of Africa and the region to produce pertinent legal instruments and strengthen enforcement mechanisms at national, regional and local levels; 2) Promote alternative sources of energy to reduce local charcoal consumption; and, 3) Provide alternative livelihoods to the Charcoal Value Chain Beneficiaries (CVCBs) involved in the charcoal production and trade.

LDCF funds will be used to develop alternate livelihoods such as by empowering women to sell adaptation technologies (e.g., rainwater harvesting equipment). Also, the land use policies to be developed in each zone and reforestation activities will restore ecosystem services required to improve present agro-pastoral livelihoods under conditions of climate change, including extremes.

87. ***UNDP Poverty Reduction and Environment Protection (PREP) Programme*** (2013-2015, co-financing USD 1,500,000 from UNDP Trac funding and USD 9,000,000 from the PREP programme): UNDP-Somalia Poverty Reduction and Environment Protection Programme (PREP) supports vulnerable communities by providing pro-poor social services towards achieving the MDGs and by creating an enabling environment for reconstruction and development. It strives to increase local community's income, improve their ability to manage natural resources, and prevent or mitigate the impact of disasters, both natural and man-made. The programme specifically focuses on community support, with a broad range of partners at the community level and in the private sector.

88. The goal of local economic development in PREP is primarily achieved by investing in the productive infrastructure (e.g. feeder roads, markets, irrigation systems, agricultural land reclamation, slaughter houses, fishery facilities and water catchments for livestock use), and social infrastructure and community facilities (e.g. water networks, waste water treatment plants as well as health and education facilities). The geographical focus of these fast-track early recovery schemes is in areas where there is high probability of achieving peace and stability, and / or generates significant short-term employment opportunities. LED projects have included the installation of gabion, water diversion infrastructure and earth dam construction.



With the support of LDCF, efforts will be made to construct and rehabilitate water mobilization infrastructure (e.g. replacing open water irrigation canals with piping systems) and making ecosystems more climate resilient (e.g., through water diversion and gabion construction). Such activities will significantly reduce downstream maintenance costs and offer more sustainable solutions to cope with extreme climatic events in Somalia. Also, the proposed project will develop policies and reinforce institutional capacities to apply climate sensitive NRM practices. Simultaneously, the proposed project will build off the water mobilization and diversion designs and techniques tested in the Local Economic Development projects under PREP. It will take lessons learned as to how to engage NGOs and CBOs in implementing small-scale NRM measures such as soil bunds and gabion walls. By revitalizing CBOs in the target areas and supporting motivated NGOs, these organizations will have the capacities to then upscale such transferrable interventions throughout Somalia.

89. ***MDG initiative for Somalia- Reducing hunger and food insecurity in Puntland region through improved and sustainable use of rangeland resources*** (2013-2019, USD 34,000,000). The EU's ***SHARE Initiative - Support to Horn of Africa Resilience*** includes two baseline projects: 1) the MDG initiative and 2) the Economic Development Programme for Growth and Resilience (see Section 2.3.2). The ***MDG initiative*** targets Puntland due to the recurrent drought and land degradation in Puntland, the fact that there are fewer initiatives to improve food security in Puntland relative to Somaliland and that environmental degradation in Puntland has reached levels of very serious concern among the international community, Puntland stakeholders and the regional Government. Through the MDG initiative the EU aims to help plan, implement and monitor the programme by using local authorities and communities and by building their capacities in a sustainable way. The MDG initiative aims to combat rangeland degradation by improving the sustainable use of rangeland resources and bringing over 1.5 million pastoralists, agro-pastoralists and other vulnerable rural people earning less than a dollar/day, above the poverty line (thereby contributing to improving Millennium Development Goals (MDG) 1 (food security and water infrastructure development) and MDG 7 (managing rangelands). Moreover, restored rangelands are planned to provide full and productive employment to rural populations through revived rangeland-based livelihoods and Cash for Work<sup>32</sup> opportunities. Furthermore, the initiative is making local development have greater impact by harmonizing traditional rules (Xeer) with the government objective to promote conservation of the environment. The MDG initiative is facilitating the adoption of community plans at local level and supporting the interaction among communities toward the management of conflicts based on disputed natural resources.

90. In the MDG initiative, a new set of economic activities will stand on the side of traditional ones. These activities – in both environmental protection and rangeland monitoring - will strengthen the local management of rangelands, will provide vocational training and will increase the number of people that will have decent, socially recognized work. It will also focus on Integrated Water Resource Management (IWRM). In order to establish appropriate Monitoring and Evaluation, the communities will first assess the natural resources that are available in their area of influence. Next, communities will prepare a plan for the general management and conservation of the natural resources. Each plan will be budgeted and the community will contribute to the budget. A committee formed within the community supervised by the project will implement the plan.

91. Specifically, the MDG initiative has similar objectives as the LDCF1 project in the Puntland area and will provide full support in the following aspects:

- Combating rangeland degradation and improving the sustainable use of rangeland resources;
- Providing employment to rural populations by i) reviving rangeland-based livelihoods, ii) creating jobs linked to environmental monitoring and protection and iii) providing Cash for Work opportunities;

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<sup>32</sup> "Cash-for-work" is a short-term intervention to provide temporary employment in public projects - such as repairing roads, clearing debris or re-building infrastructure - to the most vulnerable segments of a population.

- Empowering communities to manage small funds for projects to mitigate drought or to improve their livelihood with a Community Driven Development (CDD) scheme; and
- Strengthening institutional, policy and legal frameworks for rangeland protection.

92. The MDG Initiative Result (bullet point 4 above) includes strengthening institutions and policy frameworks. Specifically, the Initiative includes the development of an overall Rangeland Policy based on updating enacting and implementing existing relevant policies. For instance, a law that rescues traditional values and codes with regards to rangeland management is planned to be developed, discussed with civil society and approved by the Parliament. As a baseline project providing cofinancing for the LDCF1 project, lessons learned from the MDG initiative will support successful development of a National Climate Change Policy.

As the MDG is only concerned with Puntland, lessons learned and successful on-the-ground activities from the MDG initiative will be expanded in the proposed project in Somaliland and South Central. Concepts to be upscale include using policy development, Cash for Work, restoring rangelands and building on the natural resource dispute resolution process at the local level. In return, the adaptation alternative provided by the proposed project will create and enforce land use policies which will be directly relevant to all rangeland activities by the MDG. It will also create an over-arching National Climate Change Policy to guide adaptation activities and mobilize funds for future adaptation measures (based on lessons learned from the Rangeland policy to be developed by the MDG initiative). LDCF funds will also support ministries, institutions, CBOs and communities by increasing their awareness on climate change adaptation and disaster preparedness.

93. The following two projects/programmes by AfDB and FAO are considered baseline but will not be providing cofinancing. The AfDB DRSLP programme is still under development, so it cannot provide co-financing at this stage. Similarly, rather than provide cofinancing, FAO will sign an inter-agency agreement with UNDP so that their extensive expertise can be used to support activity implementation. It is planned that FAO will provide direct support by assisting with Agro-Pastoral Field School development.

94. The ***Drought Resilience and Sustainable Livelihoods Programme in the Horn of Africa (DRSLP)***, African Development Bank (46.5m USD, 2013-2017, AfDB, including external resources from SDC Swiss. Note this programme will NOT be providing cofinancing). The *DRSLP* is aimed at building resilience and sustainable livelihoods for pastoral and agro-pastoral communities in drought-prone areas in all zones of Somalia (Somaliland, Puntland and South Central). The *DRSLP* programme will be focusing on Somalia and Chad and will be implemented by the Ministry of Environment in Puntland. The *DRSLP* plans and target areas have not yet been finalized. The programme foresees the following general objectives:

- Providing water mobilisation schemes (e.g., boreholes, Berkads, infiltration galleries);
- Improving rangeland management;
- Building technical capacities on the national level for the Environment and Water ministries; and
- Providing training to communities on water resources management and community infrastructure maintenance.

A strong collaboration between the AfDB and UNDP will ensure that trainings are consolidated and that water mobilisation efforts are complementary in Somalia for i) Natural Resources Management (NRM); soil and water, sand dunes, ranges and grazing lands; ii) Market access; roads, feeder and access roads, markets, iii) Livelihoods; income generating activities and iv) Capacity building for relevant line ministries., LDCF funds will be used to put into practice climate resilient sustainable NRM activities on the ground by developing integrated land-use policies in each zone of Somalia and to empower CBOs to share knowledge with the communities on sustainable climate resilient grazing practices and flood and drought preparedness.

95. ***Somalia Water and Land Information Management (SWALIM)*** service (FAO, currently in Phase V. Note FAO and UNDP will have an inter-agency agreement for the LDCF1.): This service gathers significant weather and climate data as well as data on land and water resources, to support donor interventions. SWALIM manages 80 manual rain gauges, 6 Automatic Weather Stations (AWS) and synoptic stations in Somaliland and Puntland. Data is collected every month or every 5 days if there is urgency, such as an impending flood event. Data is sent to Nairobi, the headquarters of SWALIM, where the data is treated and analysed. Through the SWALIM initiative, FAO is therefore responsible to act as a data centre supporting each ministry's mandate. After data treatment, data is transferred back to the ministries in the form of monthly bulletins, 5-day forecasts and crop forecasts for Somaliland and Puntland. SWALIM is also ensuring that capacities are transferred to the national ministries; FAO SWALIM has a Letter of Understanding (LoU) with the pertinent line ministries to provide a Capacity Development Programme over 5 years. Ministries of Agriculture, Environment and Water in all zones are currently being seconded to FAO for training and access to data treatment/analysis equipment. Two ministry representatives from each ministry are being trained. Every 6 months there is an inter-ministerial coordination committee to discuss monitoring needs/issues. An issue is that after training, the trained individuals often leave for NGOs.

96. Currently, alerts are disseminated by weekly and monthly bulletins, and via email/radio. Due to monitoring constraints, downscaled forecasts for flood and seasonal droughts are required. Also, stakeholder consultations indicated that alerts would be more effectively communicated with SMS.

97. SWALIM has created a drought tool to quantify which areas are most vulnerable. They have also conducted a land degradation assessment (LANDA), including detecting land-use changes over time using satellite images. Within SWALIM, they have also created a working group to establish a flood risk and response information management system. FAO is also training NGOs to develop contingency plans for floods and droughts. Furthermore, in South Central Somalia, FAO works mainly with NGOs using Cash for Work (CFW) schemes.

98. Most relevant to this project, FAO is leading Farmer Field Schools throughout Somalia. The technical experts provide guidance on Soil and Water conservation practices in addition to sustainable grazing practices.

The LDCF financed project will be used to build off the capacity building work by FAO SWALIM, most notably in the development of in-house Climate Monitoring and Early Warning System (CM/EWS) centres for Puntland and Somaliland. LDCF funds will be used to do additional testing to improve alert dissemination in each zone and to decentralize disaster preparedness capacities with the development of District Disaster Management Committees (DDMCs). Due to their significant experience in building capacities for farmers in Somalia, an inter-agency agreement between UNDP and FAO will be signed. Through this agreement, technical experts from FAO will be consulted during the establishment of Agro-Pastoral Field Schools. Similarly, in developing ASAL adaptation plans, the proposed project will exploit FAO SWALIM's drought tool.

99. Apart from the AfDB DRSLP and FAO SWALIM programmes, the following baseline projects will provide cofinancing as detailed below in Table 2.



Table 2: Co-financing from Baseline Projects

Sources of Co-financing	Type	Purpose	Amount (\$)
Ministry of Petroleum, Minerals and Environment (MPME), Government of Somalia	Grant	The MPME will be providing staff and office space to support project implementation	8,000,000
UNDP TRAC funding for Poverty Reduction and Environment Protection Programme (PREP)	Cash	PREP is aligned with the project in terms of: 1) stabilization of livelihoods (e.g., using cash for work schemes) and 2) providing local economic development projects which reinforce environmental management at the local level, promote environmental recovery of degraded land and support water resources management.	1,500,000
Poverty Reduction and Environment Protection Programme (PREP)	Cash	Co-financing will support on-the-ground water management and improved agriculture and access to markets in Component 2 which are strongly aligned with the Local Economic Development projects planned under PREP.	9,000,000
UN's Joint Programme for Sustainable Charcoal Production and Alternative Livelihoods (PROSCAL)	Grant	The PROSCAL initiative will coordinate with the LDCF1 project in support of i) strengthening Natural Resource Management; ii) facilitating more resilient and sustainable livelihoods; and iii) reforesting and rehabilitating degraded ecosystems for environmental conservation	12,320,000
EU's MDG initiative for Somalia - Reducing hunger and food insecurity in Puntland region through improved and sustainable use of rangeland resources	Grant	The MDG initiative will coordinate the following efforts with the proposed project: i) combating rangeland degradation and improving the sustainable use of rangeland resources; ii) providing employment to rural populations by a) reviving rangeland-based livelihoods, b) creating jobs linked to environmental monitoring and protection and b) providing Cash for Work opportunities; iii) empowering communities to manage small funds for projects to mitigate drought or to improve their livelihood with a Community Driven Development (CDD) scheme; and iv) strengthening institutional, policy and legal frameworks for rangeland protection	34,000,000
<b>TOTAL</b>			<b>64,820,000</b>

### 2.3.2 Related Initiatives

100. The LDCF financed project will also coordinate with related initiatives. Details on how LDCF funds will be used to complement the related initiatives are included in the boxed text below the descriptions of the initiatives.

101. The ***Economics of Land Degradation (ELD) Initiative*** in Somalia (2014, UNDP and GIZ, \$67,000). The ELD is an initiative for a global study on the economic benefits of land and land-based ecosystems<sup>33</sup>. The initiative is financed by the ***Drylands Development Centre (DDC)***, a thematic policy centre of UNDP, and GIZ. The ***DDC***'s development objective is to contribute to rural poverty reduction and increased food security for the communities living in rural drylands. DDC contributes to their objective by i) mainstreaming drylands issues into development frameworks leading to budgetary allocation for implementing livelihoods options on the ground; ii) strengthening the rural economy and creating and implementing livelihood opportunities; and iii) improving capacities of local communities for governance and sustainable management of local resources.

102. Along with the support of DDC and GIZ, the ELD is increasing the political and public awareness of the costs and benefits of land and land-based ecosystems by developing a methodology and tool to assess the Economics of Land Degradation (ELD) in Somalia (i.e., a tool to highlight the value of sustainable land management). The tool will provide detailed mapping exercises to help contextualize the ELD initiative by analysing existing findings concerning the economic valuation of natural resources.

The LDCF financed project will collaborate closely with the Drylands Development Centre. Consultations during project development indicated that in order to improve dryland development, the DDC must be implicated from the beginning and throughout project implementation. DDC will be consulted on Land-Use policy development, improving pastoral livelihoods and reinforcing community-based NRM in the dryland regions of Somaliland and Puntland. Findings from ELD will be incorporated into the Arid and Semi-Arid Land (ASAL) adaptation plans for Somaliland and Puntland. The plans will then guide adaptation activities for all zones in the future.

103. The ***Joint Programme on Local Governance and Decentralized Service Delivery (JPLG)*** (JPLG) (ILO, UNDP, UNHABITAT, UNICEF and UNCDF 2008 – 2015, 54.67m USD) supports regional institutions in Somalia, ensuring local governance contributes to fair delivery of services and stability in the country in eight programmatic areas: decentralization, land management, municipal finance, local economic development, service delivery, social accountability, planning and budgeting and fiscal transfers. JPLG has made significant strides in advancing local governance and in decentralizing services by supporting capacity development for a range of stakeholders from communities, women groups, district departments and line ministries. For instance, JPLG provided technical support to produce a draft policy guide for community engagement on local planning and social accountability with the Ministries of Interior in Somaliland and Puntland. JPLG also conducted sector studies in water and natural resource management to assess the opportunities and capacities of key sector ministries and central authorities. At the district level, JPLG supported capacity for participatory and strategic planning to enhance the use of resources. It also supports women to get involved in development, through public meetings, training, outreach and media campaigns.

<sup>33</sup> For more details see <http://eld-initiative.org/index.php?id=23> .

The LDCF financed project will work with JPLG to ensure that line ministries, districts, women-based groups and CBOs have reinforced capacities on climate change adaptation and disaster preparedness. Lessons learned on effective capacity building will be integrated into the proposed project. Land-use policy development in each zone will draw lessons from JPLG on how to properly engage communities. Also, findings from JPLG's sectoral studies on water and NRM will be integrated into the ASAL adaptation plans and land use plans to be developed with LDCF funds. The adaptation alternative to be provided by the project is to decentralize Natural Resource Management and disaster preparedness. CBOs will be revitalized to ensure sustainable land management and district Disaster Management Committees will be created to support community-based flood and drought preparedness.

104. The *Economic Development Programme for Growth and Resilience* (EUR 42 M) is another project under SHARE of the EU which aims to i) strengthen the livestock sector by boosting its export capacity at all levels and by supporting the *Sheikh Regional Technical Veterinary School*; ii) enhance crop production through small scale irrigation, grain banks and plant genetic resources; and iii) maintain continued support to information networks such as FSNAU and SWALIM to ensure timely information transmission on food, nutrition, livelihood security, land and water.

105. *European Commission's Humanitarian Aid and Civil Protection department (ECHO)* (EUR 40 m): ECHO supports interventions in the areas of protection, food security, health, nutrition, shelter, water and sanitation, hygiene promotion, livelihoods support, and coordination of aid. Assistance and protection actions will focus on the most affected regions of central south Somalia, where needs are still the greatest in addition to vulnerable pockets in Puntland and Somaliland. The Commission focuses on actions that save lives during emergencies such as treatment of malnutrition; emergency preparedness actions including surveillance; and interventions that increase the recovery and resilience of the communities most affected by recurrent crises. The Commission remains dependent on the implementation capacity of its operational partners on the ground, their level of access to populations and their ability to operate while reducing risks to their staff. The International Rescue Committee (IRC) with support from the European Community Humanitarian Office (ECHO) is working with those people who were displaced by the drought in the Mudug region in South Central Somalia. Working in cooperation with displaced communities, the IRC is providing water and sanitation facilities to those living in camps and settlements in Mudug by extending water pipelines and creating water catchment areas so that families, and their livestock, have access to clean, safe drinking water. Five boreholes have been repaired in camps and villages. The IRC has trained community members to maintain these water facilities and communities are responsible for water safety. Community members, in particular women, have been trained on hygiene promotion in order to prevent the spread of water-borne diseases in their families and communities. 40 community hygiene promoters have been trained and they conduct house-to-house visits, emphasising the importance of hand washing with soap and the safe disposal of waste. Over 27 000 people were reached by IRC - ECHO projects in 2012.

LDCF funds will be used to upscale and support timely warnings from ECHO and the Economic Development Programme for Growth and Resilience. The proposed project will also support disaster preparedness on national and local scales. It will build on ECHO's experience in training communities in the operation and maintenance of water facilities.

106. *IGAD Climate Prediction and Applications Centre (ICPAC)*. The ICPAC has a mission of fostering sub-regional and national capacity for climate information, prediction products and services, early warning, and related applications for sustainable development in the IGAD Sub-Region. ICPAC monitors droughts and floods indirectly through seasonal forecast/outlook forums. The regional forecasts are developed using statistical regressions between seasonal rainfall and Sea Surface Temperatures (SSTs) and other climate indices that affect rainfall characteristics in the region. ICPAC

products include, a) analysis of past climate, b) monitoring of current climate, c) prediction products, d) impacts and e) seasonal drought forecasts. ICPAC supported the NAPA preparation process through assessing climate data modelled projections.

107. IGAD is also implementing the *Hydrological Cycle Observing System (HYCOS)* project under IGAD's *In-land Water Resource Management Programme (INWRP)* Through HYCOS, IGAD is maintaining a river gauge network in Somalia to increase flood preparedness. HYCOS includes 30 river gauge measurement stations, 1 Acoustic Doppler Current Profiler (ADCP) and 10 rain gauges. Through the INWRP, IGAD is constructing water mobilisation structures in the Juba watershed between Somaliland and Djibouti.

The LDCF financed project will collaborate closely with the ICPAC while developing Climate Monitoring / Early Warning System (CM/EWS) centres. The centres will be trained in disseminating ICPAC seasonal drought forecasts. Also, the CM/EWS centres will incorporate all HYCOS river gauge monitoring measurements into their databases to enhance flood preparedness. Lessons learned on effective water mobilization construction for dryland areas (e.g., IGAD's work on the upstream Juba watershed in Djibouti) will be incorporated into the proposed project. This project will link up with the UNDP-GEF Climate Information for Resilient Development (CIRDA).

108. The *Food Security and Nutrition Analysis Unit (FSNAU)* supports monitoring all over Somalia on agriculture indicators, rainfall measurement, and market prices of food commodities. After every rainy season the field monitors come together with experts in food security and nutrition to analyse the previous season and its impacts on the community. The analysis is summarised in one map representing Integrated Food Security Phase Classification (IPC). The country is then categorised according to the prevailing situation in terms of food security/insecurity. The causes of food insecurity are also highlighted on the map including floods, insecurity, drought and/or population influx etc.

The Climate Monitoring / Early Warning Centers (CM/EWS) Centres and District Disaster Management Committees to be developed with LDCF funds will integrate any lessons learned from FSNAU on causes and means to mitigate food insecurity.

109. *Famine Early Warning Systems Network (FEWSNET)*. FEWSNET is an information system designed to identify problems in the food supply system that potentially lead to famine or other food-insecure conditions in Sub-Saharan Africa, Afghanistan, Central America, and Haiti. It is a multi-disciplinary project that collects, analyses, and distributes regional, national, and sub-national information to decision makers about potential or current famine or other climate hazard, or socio-economic-related situations, allowing them to authorize timely measures to prevent food-insecure conditions in these nations.

The Climate Monitoring / Early Warning Centers (CM/EWS) Centres will link with FEWSNET in early warning dissemination. The CM/EWS Centres to be developed with LDCF funds will exploit the FEWSNET drought forecasts.

110. *Somali Development Fund* (funded by DANIDA, DFID, Sweden for Somaliland) The SDF is a program led by Somaliland ministries to mitigate the impacts of drought. Water harvesting, mobilization, improved forage production, reforestation and livelihood diversification are stressed. According to local NGOs/CBOs, there is limited funding available for decentralized organizations/institutions.

111. *CARE International (NGO)* has several relevant projects to the proposed projects including:

- *Towards Sustainable Pastoralism in Sool and Sanaag*: research project aimed at identifying ways to ensure that pastoralism survives and thrives in the face of

increased frequency of droughts, degradation of natural resources and resource based conflicts.

- **Somalia Youth Leadership Initiative (SYLI)**: a new 5-year project in Somaliland and Puntland aimed at empowering Somali youth to contribute positively and productively to society. The project seeks to increase educational, economic and civic participation opportunities for Somali youth and help them become self-reliant. Project activities will include classroom construction and rehabilitation, improved community discussions on education, vocational training for unemployed youth, support for small business start-ups, and strengthening of youth groups as safe places for open discussions on problems facing the youth.

LDCF funds will be used to implicate youth in climate change awareness building. Funds will be used to empower youth by providing prospective university students with scholarships to study in one of the fields where climate modules will be developed under the proposed project (e.g., in existing agriculture, water resource engineering study programmes). Education for youth in climate-related disciplines will provide a pool of potential qualified recruits for the understaffed ministries.

112. Other related initiatives include:

- On-going work by the **International Labour Organization**: focusing on land, forestry and water and how the government decentralizes service delivery. They are promoting Soil and Water Conservation methods, water mobilization, storage and harvesting.
- **Candlelight** work including nursery development to raise seedlings for reforestation. To date, Candlelight has generated 30,000 seedlings per year.
- **Somali Institutional Development Project** (UNDP, USD 5m, 2009 – 2015): Through this project, policy and law-making processes and systems are currently being developed. Human resource skills are also being enhanced in addition to improving public financial management and developing institutional infrastructure.

### 2.3.3 National and local benefits

113. The LDCF1 project supports national development goals and plans to achieve Millennium Development Goals (MDGs) 1, 3, 7 and 8 in the following manner.

- **MDG 1: Eradicate extreme poverty and hunger** – by providing access to improved ecosystem services and building community capacity for sustainable agro-pastoralist practices, rural populations have the potential to build their resilience to climate shocks and have more assets and greater food security.
- **MDG 3: Promote gender equality and empower women** – women will become represented in decision-making and policy development. They will also have at least 30% representation in trainings on national and community levels and will be included as mandatory members of the District Disaster Management Committees. They will also become empowered to diversify their livelihoods through training on adaptation technology marketing.
- **MDG 7: Ensure environmental sustainability** – the foundation of the project is to ensure environmental sustainability by supporting rural communities to have a secure water supply and to be able to adapt to climate change with climate resilient agro-pastoral practices.
- **MDG8: Develop a Global Partnership for Development** – the project will coordinate with other regional initiatives, such as IGAD and AfDB's DRSLP programme, to facilitate climate-resilience building activities.

114. On a national level, the programme will support policy development, training and the creation of Climate Monitoring / Early Warning centres. On a local level, district Disaster Management Committees will be created. On-the-ground at the local level, Community-Based Organizations will



be revived to support adaptation measure implementation. Also, the communities will be able to reap the benefits from the mobilisation of water, the provision of improved ecosystem services enforced by appropriate legislation as well as the promotion of sustainable agro-pastoral practices and the diversification of livelihoods for women. Many of the interventions will benefit the entire hydrogeological zone, while pilot activities such as district level adaptation plans and demonstration sites for soil and water conservation practices will be implemented in the selected areas.

115. Quantified socio-economic benefits expected from the project include the following:

- Capacity reinforcement for 60 ministry officials in Public Administration and Management for adaptation-related projects
- At least 9 students (3 of which are women) supported to attend NRM-focused higher degree programmes to empower technical graduates to serve in understaffed ministries
- Establishment of Climate Monitoring / Early Warning System Centres in Puntland and Somaliland and reinforcement of the existing DRM agency in South Central
- Support for 8 district Disaster Management Committees, each with 15 people, 5 of whom will be women, to have the capacity to prepare disaster preparedness plans in the context of climate change
- Training for 200 agro-pastoralists on soil and water best practices through an Agro-Pastoral Field School approach
- Small grant support for 90 CBO members to implement small-scale community-based EbA and NRM measures such as gabion walls for flood control
- Implementation of over 20 large-scale flood control and water mobilization measures to benefit approximately 30,000 people in Somaliland and Puntland and 60,000 in South Central
- Support for 1 woman per zone to represent Somalia in international and regional climate negotiations
- Training for 300 women entrepreneurs on value-chain analysis and marketing of adaptation technologies

#### 2.3.4 UNDP comparative advantage

116. UNDP has a strong comparative advantage to implement this project, both corporately based on its extensive experience and knowledge in the field of climate change adaptation and development, and locally on the ground based on its ongoing activities in the country. UNDP is one of the most active agencies supporting the Somali government in the area of climate change, having supported its first climate-related planning exercise vis-à-vis the development of the NAPA.

117. Since the collapse of the State institutions in 1991, UNDP together with around 23 other UN agencies in Somalia, has been helping Somalis recover from years of conflict and set Somalia on the path to development. It supports Somalis to build peace, reconstruct their infrastructure and rebuild their institutions. In all its activities, UNDP encourages the protection of human rights and the empowerment of women. UNDP is an important and active member of the United Nations County Team in Somalia.

118. Given the long-standing commitment and experience in Somalia, UNDP has been able to develop partnerships with governments, local institutions and communities. This strong network places UNDP in an excellent position to lead this LDCF-funded project. It has been implementing projects under four programmatic areas, which include:

119. Through its Poverty Reduction and Environment Programme (PREP), UNDP has increased livelihood opportunities and improved natural resource management in vulnerable communities across Somalia. Under PREP, the UNDP has recently launched the UN Joint Programme for

Sustainable Charcoal Production and Alternative Livelihoods, which is expected to make significant contributions to increasing the resilience of communities in Somalia.

120. As a trusted development partner and co-sponsor of UNAIDS, UNDP's main focus is to build national capacities of government at all levels and work closely with civil society to support a coordinated and effective response to the HIV & AIDS epidemic.

121. UNDP's Rule of Law and Security Programme works towards improved security and protection under the law for all Somalis. As such, it seeks to advance human development by strengthening national and local capacities to prevent, mitigate and cope with the impact of violence.

122. UNDP is expanding its work to promote gender equality and women's empowerment by providing strategic support to relevant Somali stakeholders. It aims to empower Somali women to be able to determine and lead their own agendas, as well as inspire others, and holds leadership training and provides mentoring services to women active in government, civil society and the private sector. Meanwhile, through a wider engagement with young people, communities, and institutions, UNDP boosts efforts to promote gender equality and women's rights.

123. With the recent positive developments in Somalia and greater stability, UNDP has taken swift actions to relocate its office for Somalia from Nairobi to Mogadishu and intends to continue with a strong presence in the capital. Due to more peaceful conditions in Puntland and Somaliland, the UNDP offices are well established in the capitals of both regions respectively.

## 2.4 Project Objective, Outcomes and Outputs/activities

### Project Objective<sup>34</sup>

*The project objective is to enhance resilience and improve adaptive capacity of vulnerable Somali communities in pilot areas, and the ecosystems on which they depend, to the adverse impacts of climate change*

124. The project's Theory of Change<sup>35</sup> is to set the foundation to mainstream Climate Change Adaptation and Natural Resource Management into Somalia's nascent national and community governance structures. Policy development will create an enabling environment for sustainable land management to combat the deleterious impacts caused by extensive deforestation and over-grazing. Institutions will be created and reinforced to have the capacity to manage and prepare for floods and droughts, helping to reduce Somalia's dependency on humanitarian aid. Women will become agents of change, having the capacity to make decisions on the use, management and protection of natural resources. Based on this solid foundation, communities will have access to improved ecosystem services and will be able to develop more climate-resilient livelihoods. Women and youth will also be empowered with climate change knowledge so that they can seize employment and business opportunities.

### Component 1: Enhancing policies, institutional frameworks and government capacities

**Outcome 1:** Policies, plans and tools reviewed, revised, developed, adopted and implemented by government to mainstream and enhance adaptive capacity and mitigate the risks of climate change on vulnerable communities and critical ecosystem services

#### 2.4.1 Baseline Component 1 - Without LDCF Intervention

### Baseline Component 1

125. Ministries active in the environmental sector, such as the Ministries of Water, Planning, Agriculture and Livestock and Women in all zones of Somalia, have limited understanding of climate change and its impact on ecosystem services. For instance, no ministry has ever conducted a climate change impact assessment to be able to outline potential adaptation options. Consequently, other than the NAPA (2013), there are no policies, strategies or development plans which address how to effectively adapt to climate risks. Only ad-hoc, general policies on the environment and disaster risk management exist, such as the National Policy on Environment in Somaliland and a Disaster Risk Reduction Framework in Puntland. Cross-sector, coordinated institutionalization of climate risk management has yet to take place.

126. Moreover, rural populations rarely profit from and abide by the existing environmentally-related policies and regulations because they are unaware of their existence. During government consultations, it was pointed out that a major barrier to implementation of existing policies is the lack of awareness and communication of the policies to key stakeholders, namely local authorities, the private sector, communities and NGOs.

127. In addition to having limited, unenforced and unrecognized policies, institutions also lack the technical and human resource capacities to fulfil their mandates due to lack of financing and often frequent restructuring. With no training curriculum in place and a lack of training materials available for environmental fields, the availability of skilled local trainers is limited. Universities currently have no mention of climate change in any of their curricula for agriculture, water resources engineering and other related disciplines. The concept of climate change is essentially absent from any formal

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<sup>34</sup> Objective (Atlas output) monitored quarterly ERBM and annually in APR/PIR

<sup>35</sup> *Review of the use of 'Theory of Change' in International Development Review Report*, Isabel Vogel, April 2012



educational institutions at all levels from primary to higher education. Additionally, key implementing ministries require assistance in project planning, implementation and monitoring. Without such capacity, ministries have no autonomy in carrying out projects and works and often rely on donor management.

128. The process of environmental integration into community planning through donor support is on-going (e.g., JPLG district planning for water and EU MDG land use initiatives). Communities and government stakeholders are well aware that climate change is affecting the environment and the ecosystems services that it provides. However, there is a notable lack of awareness and planning on what actions are required to specifically address the impacts of climate change so as to improve ecosystem services.

129. Furthermore, disaster risk preparedness is extremely weak in all zones. Knowledge on disaster preparedness and management is minimal for all relevant Disaster Risk Management (DRM) institutions from national down to district level outlets. Technical and operational capacities are weak and even absent in some cases (the centralized agency for DRM in South Central has only been functional for one year). Although droughts and floods are becoming more frequent in Somalia, there is no national institution which can provide forecasts (forecasts are provided by FAO SWALIM, FEWSNET and IGAD's ICPAC). Monitoring infrastructure is also scarce due to the destruction and theft of equipment during periods of civil unrest since 1991.

130. Key ministries involved with the environment, natural resource management and land planning in each zone are subsequently discussed. Their inadequacies and needs are detailed. Disaster risk management capacities and needs are, likewise, discussed in a subsequent section.

## Environment, Natural Resource Management and Land-Planning

### South Central

131. Since the initial stages of the NAPA process there have been several restructurings of the cabinet and ministries of the Federal Government of Somalia (FGS). The new and current focal point has been designated by the President as the Ministry of Petroleum, Mineral Resources and Environment (MPME). This ministry is also the new focal point appointed for GEF. The Environment Department of the MPME is fully mandated to address environment issues and to serve as the coordinating body for all environment related policies and programs.

132. The previous Ministry of National Resources, which was formerly responsible for environmental management, had drafted the National Environmental Policy, which has yet to be finalized. The policy specifically addresses climate change as a major challenge, and refers to the NAPA as the guiding document for taking further action. The National Environmental Policy prioritizes three areas with respect to climate change: 1) to develop capacity and institutional strengthening for stakeholders in respect to climate adaptation, climate change, and climate variability, 2) to encourage demonstration of new ideas and techniques through field based interventions that improve resilience of the population and ecosystems, and 3) to set up information, education and communication campaigns for stakeholders on the risks due to climate change and climate variability. In addition to the National Environmental Policy, a National Environmental Action Plan (NEAP) has also been developed. The NEAP is an important guiding document which this LDCF-funded project builds upon by aligning the project activities with the priority actions listed under the NEAP. The NEAP has a section on climate change and recommends the development of policies and frameworks in three main areas which include climate change, flood management, and drought management.

133. With the overarching role of coordinating development in South Central, the Ministry of Planning and International Cooperation (MoPIC) is responsible for cross-sectoral planning and ensures that activities are in line with government development plans and are not duplicated by other development partners. The MoPIC is also responsible for the coordination of the Federal Government's Annual Work Plan (AWP) whereby each ministry at the Federal level has submitted a detailed work plan for 2014 to inform the Government programme of work in line with this

Constitutional requirement. Under the AWP, the Ministry of Planning and International Cooperation has three main tasks which include: 1) Development of a 5 year National Development Plan (NDP) and poverty reduction strategy, 2) Improve national statistical systems and institutional capacity in statistics, and 3) Conduct Social Economic Survey.

134. Coordination issues, particularly in funding and management of ministry-level initiatives, remain serious challenges to the execution of the Federal Government's peace- and state-building goals. To address these issues, the Ministry of Planning and International Cooperation coordinates efforts across ministries and streamlines aid planning and delivery. This arrangement more efficiently brings together ministries and potential foreign donors and international financial institutions in implementing the government's peace- and state-building goals.

135. Another institution that is concerned with Climate Change is the Ministry of Water and Energy. The Ministry of Energy and Water's key priority is to identify areas of weaknesses in the energy sector and to develop policies that address energy and water challenges. The Ministry maps out Somalia's national resources, infrastructures and facilities to ensure the government reclaims them, especially in cases where they have been misappropriated for private use. The Ministry understands the importance of sustainable energy resources that are essential to economic recovery strategies as outlined in the government's Economic Recovery Plan. The Ministry of Energy and Water Resources had, in the past, offices for 18 regional water authorities across the country. The 1991 civil war brought destruction on a massive scale, and since then no rehabilitation or reconstruction works have taken place, leaving the buildings abandoned for many years. In the AWP, the Ministry of Energy and Water plans to develop master plans for urban water, sanitation and solid waste management for major towns. The Ministry of Energy and Water also aims to enhance Somali water and land information management and is a key stakeholder in the Land-use policy development activities.

136. As agriculture plays a very important role in the economy of the South Central region, the Ministry of Agriculture also has a critical task of addressing climate change adaptation. Somalia's farming areas are concentrated in the southern part of the country, in the Gedo, Middle Juba, Lower Juba, Lower Shebelle, Middle Shebelle and Hiran regions. The Juba River and Shabelle River pass through these regions, rendering the soil more conducive to crop cultivation than the comparatively arid north, where agriculture is a less dominant livelihood source. The Ministry of Agriculture aims to rehabilitate vital crop production and infrastructure in South Central Somalia through building livelihood strategies for agricultural production and widening access to the agricultural market for producers.

137. The semi-arid and arid environmental conditions of much of the country make pastoralism the most viable livelihood for most Somalis. The Ministry of Livestock, Forestry, and Range is responsible for supporting pastoralist livelihoods in South Central Somalia. The majority of Somalis rely on livestock production for their subsistence and basic economic livelihood. The Ministry is plagued by low capacity due to very few new young livestock professionals who have graduated from technical schools and universities to replace near-retirement professionals in the Ministry. This problem is compounded by the fact that there is an insufficient budget for livestock development programs. Under the AWP, the Ministry of Livestock, Forestry and Range plans on creating productive infrastructure for livestock. To this end, the ministry will a) review and update the regulatory and policy framework, b) construct and rehabilitate laboratories, a central drug unit, veterinary clinics and warehouses. The second major goal of the Ministry is to improve the management of forests and rangelands through a widespread forestry program.

### Somaliland

138. Amongst the national institutions in Somaliland, two stand out with particularly important functions in relation to environment, natural resource management and land use planning. These include the Ministry of Environment and Rural Development (MERD) and the Ministry of Planning and Development (MoPD). Other important institutions at the Somaliland zonal level with regard to

climate change adaptation include the Ministry of Water, Ministry of Livestock, and Ministry of Agriculture.

139. In accordance with its constitutional directive, the Ministry of Environment and Rural Development (MERD) is best positioned to be the lead agency for taking action on climate change in Somaliland. The mandate of MERD is to develop the pastoral sector and to protect and conserve the environment through sustainable development aimed at eradication of poverty. The Ministry has a National Policy on Environment, which recognizes the requirements set out in Somaliland's Constitution and provides a framework for the management of Somaliland's environment and natural resources. Other policies and plans that support the work of the Ministry of the Environment include the National Environmental Action Plan & Strategy to Combat Desertification and the Rangeland Management Policy. MERD is an emerging ministry that has been operating in the past in an environment characterized by inadequate financial, technical and managerial capacities and a weak legal framework. The ministry is particularly ill-equipped in regard to knowledge and capacity to analyse, plan for and manage the impacts of climate change.

140. With the overarching role of coordinating development in Somaliland, the Ministry of Planning and Development, MoPD, plays a crucial role in climate change adaptation, particularly in regard to cross-sectoral planning for climate change. The mission of the MoPD is to achieve rapid sustainable development in order to improve the quality of life for people of Somaliland. The key functions of the institution are to 1) provide accurate, relevant and timely information about people and economy; 2) prepare national and regional development plans; 3) formulate policy guidelines; 4) mobilize domestic and external resources; 5) register local and international NGOs; 6) coordinate development activities and 7) ensure efficient allocation of resources.

141. The MoPD has developed a National Development Plan (NDP) for 2012-2016 for which it will employ both government allocated budget and development assistance from donors for implementation. The plan includes sectors that are directly linked with the LDCF1 project including environment, rural development, agriculture, livestock and disasters management. The NDP discusses the scarcity of water resources, soil erosion, loss of biodiversity and natural resource depletion. However, the plan fails to describe in detail how it will address such climate change issues and does not allocate any budget for adaptation activities.

142. Other institutions that need to address climate concerns include the Ministry of Water, the Ministry of Agriculture, the Ministry of Livestock and the Ministry of Labour and Social Affairs (the latter of which considers gender issues). The Ministry of Water has established a framework for the management of water resources which includes a Water Policy, Water Strategy, Water Act and water regulations. The Ministry of Agriculture is also at an advanced stage with regard to the development of policies and frameworks, namely, the Somaliland Agricultural Policy, the Agriculture Master Plan, Draft Agricultural Rules and Regulations, Agricultural Land Registration Action and Agricultural Land Ownership Law, and a Food Security Act. The Ministry of Livestock also has a National Livestock Policy. Agricultural and veterinary extension services are extremely limited, as is the maintenance of water infrastructure.

### Puntland

143. In recognition of the need for an institutional approach to the environment, the Ministry of Environment, Wildlife and Tourism (MoEWT) in Puntland was established in 2009 to undertake the huge task of bringing environmental issues under one umbrella for better coordination of policies, strategies and programs. However since its creation, serious technical and human resources gaps as well as problems with the administrative organization at all levels, and particularly at the regional and district levels, have not been resolved. The Ministry remains ill equipped, understaffed, and lacks the technical expertise to implement the policies and objectives required to fulfil its mandate. Recently, a new minister was appointed to the MoEWT and the ministry has accelerated its development significantly in the past year. Tasks in progress include development of an environmental policy, a capacity needs assessment and a human resource system for improved performance; however, none of these have been completed or approved. With regard to climate change, the MoEWT is keen to integrate climate concerns into its policies and plans, but currently has limited capacity to do so.

According to Stakeholder Consultations, integration of environmental concerns into the State planning and management processes and provision of guidelines for environmental sustainable development is seen as crucial in Puntland.

144. With the overarching role of coordinating development in Puntland, the Ministry of Planning and International Cooperation has the mission to play a pivotal role in attaining and sustaining high socio-economic development through enhancing partnerships and promoting the effective use of international and national resources. One of the key roles of the Ministry is to maximize the benefits from foreign assistance to finance programs and projects in an efficient way. The Ministry plays a key role in ensuring that activities are in line with government development plans and are not duplicated by other development partners.

145. Other institutions that need to address climate concerns include the Puntland State Agency for Water, Environment, and Natural Resources (PSAWEN), the Ministry of Agriculture, the Ministry of Livestock and the Ministry of Women's Affairs and Family Development. PSAWEN was created in December 2000 under the Presidential Decree of Law No. 2 and approved by both the Cabinet and Ministries. It became fully operational in 2001 as the sole institution responsible for water, energy and minerals and was established as an autonomous agency under the Office of the President. The agency was mandated to report on water supply status, plan locations for service delivery, implement project funding by external resources, and monitoring of water quality standards. With a monitoring role, PSAWEN has the features of a regulatory body, but in practice it engaged in direct service delivery through technical assistance and minor repair of systems in rural areas owned by local governments. This agency has had serious financial constraints and has not played an active role in either service delivery or regulation and requires major capacity development.

146. As a decentralized body, PSAWEN is extended up to the regional level through the Regional Water Authorities. The Authorities and their staff are professionally responsible to PSAWEN and under its technical guidance, while being administratively responsible to the governor or the region. The regional level Water Authorities play a critical role in the operation and maintenance of water infrastructure and are important stakeholders for capacity building activities. The total staff of PSAWEN at the regional level is 96 consisting of engineers, drillers, mechanics, electricians, plumbers, finance officers, revenue collectors and watchmen<sup>36</sup>.

147. The Ministry of Agriculture is responsible for agriculture in Puntland. While farming is very marginal in Puntland, it is increasing in popularity as a livelihood in some areas; agriculture is beginning to play a key role in providing alternative livelihoods to charcoal producers and promotion of agro-forestry is seen as a key strategy for reducing deforestation. As such, the Ministry of Agriculture's role in food security and local livelihoods is increasing every year and provides a critical coping mechanism to hedge against droughts. Additionally, the linkages between livestock, water resources, forest resources and agriculture are very closely linked in Puntland.

148. In spite of its growing mandate, the Ministry of Agriculture is characterized by a lack of financial resources, natural resource management institutions, and agricultural inputs and services. This has affected their ability to support agricultural development. Furthermore, there are no extension services and no training curriculum to improve the understaffed ministry. As with other ministries, availability of skilled local trainers or training materials is limited.

149. The Ministry of Livestock and Animal Husbandry is responsible for provision of livestock-related services. Existing livestock institutions include a network of veterinary services, the chamber of commerce, the Puntland Board of Livestock Traders and the Livestock Transporters Association. In spite of its mandate, necessary husbandry-related policies and regulations are lacking in Puntland due to the ministry's lack of technical and operational capacities.

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<sup>36</sup> JPLG Sector Functional Assessment - FINAL REPORT - April 18 2012, <http://jplg.org/documents/Documents%5CJPLG%20Documents%5CPuntland%20-%20Sector%20Functional%20Assessment%20-%20FINAL%20REPORT%20-%20April%2018%202012.pdf>

150. As previously stated, in all zones, disaster preparedness capacities are also weak. The following details the capacities and needs of the relevant DRM institutions throughout Somalia.

### Disaster Risk Management

#### South Central

151. Weather monitoring ceased as soon as the civil war erupted in 1991. This saw the loss of all the monitoring systems through vandalism and lack of maintenance. The collapse of the monitoring system was then followed by many years of missing data when the FAO Food Security Analysis Unit (FAO-FSAU) in collaboration with some NGOs and UN agencies re-established a few rainfall stations in Somalia in 1997 with the hope of reviving the network of weather observations. Unfortunately this network did not last long due to lack of maintenance and prevailing insecurity. Though SWALIM has made an effort to re-establish the monitoring network, only the rainfall monitoring network has been rehabilitated to match with the pre-war network.

152. South Central recently established a focal disaster management organization. Less than a year ago, the Federal Government of Somalia announced that the Cabinet had approved draft legislation on a new Somali Disaster Management Agency (SDMA), which had originally been proposed by the Ministry of Interior. The secondment of skilled national staff to SDMA by the International Organization for Migration (IOM), improved the capacity of the institution to coordinate emergency response. SDMA led Technical Working Groups under the Mogadishu IDP relocation Task Force, before the relocation plan stalled in July 2013. SDMA also played a key role in coordinating IDP profiling exercises in some IDP settlements in Mogadishu, in collaboration with UNHCR and Save the Children UK.

153. However, SDMA's capacity for long-term preparedness on climate impacts such as droughts and floods remains extremely limited. Based on Stakeholder consultations, it is critical to mainstream DRR into the policies and plans of existing and well-established ministries including livestock, agriculture, women's affairs and water ministries. Also, local NGOs and civil society organizations have taken a lead role in responding to disasters in the past and must be considered as important implementing agents for DRR activities in South Central, particularly considering the institution is still nascent and has the weakest capacities of all zones.

#### Somaliland

154. The National Environment and Research and Disaster Preparedness and Management Authority (NERAD) received its mandate through a disaster management law/policy passed in 2007. NERAD is supported at the national level by the National Disaster Council (NDC) and the Disaster Management Steering Committee (DMSC). At the regional and district levels, Regional Disaster Management Committees (RDMC) and District Disaster Management Committees (DDMC) respectively will form part of the DRM system.

155. NERAD carries the key functions of disaster preparedness and disaster response in Somaliland. The goal of NERAD is to prevent frequent occurrence of disasters and reduce vulnerability of communities by improving sustainable coping capacities to decrease the overall impact of disasters on lives and livelihoods of Somaliland communities. Given that the frequency of both floods and droughts are expected to increase across Somalia due to global climate change, NERAD will be a key institution for enhancing resilience of Somaliland communities.

156. However, NERAD suffers from serious capacity gaps including inadequate qualified staff; inadequate staff recruitment; low level of staff skills and knowledge on disaster management; limited access to information due to inadequate skills on Information Communication Technology (ICT); lack of adequate physical assets/infrastructure and transport; and lack of capacity building for Disaster Preparedness and Management Committees (DP&MCs) at all levels. With regards to climate change, there is little or no knowledge on even the basics of climate change and its impacts, particularly with regard to disasters such as droughts and floods.



## Puntland

157. HADMA is the focal agency for Disaster Risk Management. It is an autonomous organization under the auspices of the presidential office, supporting the Puntland communities in time of humanitarian need and disaster management. Line Ministries are required to work closely with HADMA to ensure the effectiveness of all humanitarian assistance provided by the different stakeholder during the occurrence of disasters. With assistance from UNICEF, in September 2012 a Puntland Disaster Preparedness Contingency Plan was developed. This Contingency plan makes several references to climate change and its impacts on disasters. Recommendations put forward in this plan are supported by the Puntland government and international community.

158. With support from UNOCHA, in June 2011 Puntland developed a Disaster Risk Reduction Framework, which set the foundation for development of a comprehensive policy. Subsequently, a Puntland Disaster Risk Reduction and Management Policy was developed. Currently in a finalized and translated into Somali draft form, this policy needs to be urgently adopted by Cabinet. Legislation to implement key provisions of the policy, including contingency funding for disaster response, funding for preparedness and the formalization of disaster response structures, needs also to be urgently drafted and enacted.

## Gender

159. Finally, continued socio-economic and political constraints faced by women including gender inequality in education and other areas of Somali life removes important women voices from the public sphere and limits their coping capacity. The Somali Compact acknowledges that women have been disproportionately affected by discrimination and have been denied full participation in all aspects of Somali life. At the heart of the Somali Compact is that the rebuilding and governance of Somalia requires broad participation by all Somalis, including women. The Ministry of Women and Human Rights Development, which is a newly created ministry, is responsible for reversing this inequality and protecting the rights of women, children, and other disadvantaged groups of people. Under the AWP, the Ministry of Women and Human Rights Development is responsible for establishing social protection frameworks for vulnerable groups. However, the Ministry of Women and Human Rights Development requires significant capacity development on gender-sensitive climate change adaptation measures as well as training on how to increase women's representation in adaptation decision-making and strategy development.

### *2.4.2 Adaptation Alternative Component 1 –With LDCF Intervention*

160. To address the aforementioned needs, activities under Component 1 will focus on creating an enabling environment for Climate Change Adaptation (CCA) by addressing NAPA priorities 1 and 3 recommending land management and disaster risk management activities respectively. Given the serious capacity constraints and lack of existing institutional policies, regulations, plans and mechanisms to carry out basic functions, the first activity will focus on training and building capacities to plan implement and monitor climate adaptation projects. This will include training of 60 government officials from the MPME, SDMA, MoSPIC, Ministry of Agriculture and the Ministry of Water and Energy (South Central), the MoEWT, HADMA and the Planning and International Cooperation (Puntland), the Ministry of Planning, Environment and Rural Development and NERAD (Somaliland) in addition to the Ministry of Women's Affairs in all zones on public administration topics such as project planning, management and monitoring, performance monitoring systems, budget processes, accountability mechanisms, etc. A Public Administration Specialist experienced in reinforcing the capacities of multi-sectors will be hired to build institutional capacity on facilitating cross-sectoral management of CCA activity planning, management, monitoring and accountability. The Public Administration Specialist will develop a capacity building plan, which will include workshops, on-the-job training, and development of project management tools, development of HR policies, etc. related to CCA. This activity will enable these ministries to rely less on donor

management in the future and take the lead in the planning, implementation and monitoring of CCA projects in the next phases of LDCF and future CCA projects as well as other development projects.

161. It is important for all relevant ministries and other government institutions in South-Central Somalia to have a basic understanding of climate change and adaptation before further action can be taken. Under Component 1, staff from all relevant line ministries will be invited to attend a series of interactive training workshops to enhance their knowledge of climate change. This is a key activity to build the foundation for further policy action such as the integration of climate into policies. These workshops will also help to provide international best practices on how to mainstream climate change into policies. It is envisioned that this activity will help bring climate change into policy discussions and formulation processes in the future. In order to carry out this training program, a Climate Change Specialist will be positioned within the environment ministries in each zone at the MPME, MoEWT and MERD in South-Central, Puntland and Somaliland respectively, who will develop training materials, conduct workshops and prepare and disseminate materials such as briefing notes, fact sheets, presentations, guidelines for mainstreaming climate change into sectoral policies and climate risk screening tools.

162. After completing the basic trainings, key technical staff from each of the above mentioned ministries will carry out sectoral studies of the impacts of climate change on their departments. The LDCF financed project will provide experts in land-use planning, climate vulnerability and risk assessment and economics. These will be positioned within the environment ministries in each zone, but will provide extensive support to other ministries in the zones to complete their sectoral studies. The Climate Change Specialist in each zone will coordinate with each other and the respective line ministries to ensure that all the sectoral studies use the same methodologies for assessment. The MPME will be responsible for compiling all the sectoral studies into a South-Central Climate Impact Assessment Study that will form the basis for development of a National Climate Change Policy. Similarly, the Ministries of Environment will be responsible for compiling all the sectoral studies into the Puntland and Somaliland Climate Impact Assessment Studies which will take into account Arid and Semi-arid Land (ASAL) analyses. The ministries of Planning in Puntland and Somaliland will use this study to create adaptation plans, from which aspects will be incorporated into Puntland's next 5-year National Development Plan, Puntland's 5 Year Agricultural Strategic Plan and Somaliland's National Development Plan.

163. A federal National Climate Change (NCC) Policy will be developed, taking into account cross-sectoral vulnerabilities, impacts and costs for adaptation. The Policy will streamline the coordination of Climate Change / Disaster Risk Management related programmes/projects to have coherent on-the-ground programming. It will act as the over-arching, prominent policy to guide the current patchwork of sectoral policies related to the environment which cannot be easily decentralised to address all levels of governance. The policy will have the capacity to identify and resolve any transversal climate change issues across Somalia, particularly when policies conflict between zones. Although the policy will not address climate change mitigation at this stage of its development, additional financing for mitigation is planned to be mobilized by the Office of the Prime Minister.

164. In order to ensure sustainability in facilitating adaptation activities, the NCC Policy will specify how to channel future diversified funding for climate change adaptation and disaster risk management. Financing schemes will be designed to serve cross-sectoral agendas so that support will grow for adaptation- and mitigation-related activities across sectors. Development of the NCC Policy will be based on successful demonstrations in other African countries such as Zambia.<sup>37</sup> The development of the NCC Policy will mandate representation of Somalia in international and regional climate negotiations, conferences and events that promote South-South cooperation. Nine relevant and LDCF trained government officials (3 from each zone) will be supported to attend, participate and represent Somalia's interests in climate discussions and negotiations.

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<sup>37</sup> Government of the Republic of Zambia, Ministry of Tourism, the Environment and Natural Resources, *National Climate Change Response Strategy*, December 2010.

165. The Ministry of Petroleum, Minerals and Environment in South Central and the Ministries of Planning in Somaliland and Puntland will also be supported to carry out a study to identify a mix of financing sources to fund sectoral climate priorities by exploring both the international climate change financial landscape as well as domestic financial resources from taxes. With more than 50 international public funds and 6,000 private equity funds providing climate change financing, Somalia has no capacity to access and channel these funds to address the climate and development needs identified by the NAPA.<sup>38</sup> To empower Somalia to access this available financing, a study will be carried out by preferably, a qualified professional of Somali origin or an international expert, and national expert on financing needs, global and local resources and modalities for accessing financial capital. The final deliverable will include information on required investment and financial flows to support adaptation, economic analysis of different medium- to long-term adaptation options, and an assessment of the burden of climate change on the public budget by conducting a Climate Public Expenditure and Institutional Review (CPEIR) and assessing the barriers for financing adaptation in the country. Scenario analyses will include an analyse of cross-sectoral economic impacts, and the maximization of co-benefits (e.g. employment creation and adaptation needs).

166. In order to support the understaffed ministries and their need to recruit university graduates with relevant technical expertise, a climate module, with sector-focused sub-modules, will be developed and integrated into the curriculum of universities in each zone offering educational degrees on environment, natural resources, public planning and administration, agriculture, etc. The modules will include lessons on basics of climate change, Ecosystem based Adaptation, sectoral impacts, integrated land and water management principles, and international best practices on climate adaptation. The sub-modules will be designed in collaboration with faculty and will be subject specific. For example, for agricultural courses; a session on the impacts of increasing temperature on crop growth can be developed. In addition, linkages with an international University will be evaluated to broaden the exchange and to build sustainability for the programme.

167. This approach will be taken in light of the fact that a separate course on climate change may not be successful due to low awareness and demand for such education. However, existing curricula touch upon environmental issues without going into climate change. A climate change module would enhance the knowledge and capacity of young academics and future professionals to address climate change impacts across different disciplines. A Climate Education Expert will be hired to develop the modules. Consultations with faculty from key departments will first be carried out to gather information on existing curricula and to ensure contextualized modules. Relevant teaching materials on Climate Change Adaptation best practices will be developed. A lead faculty member will be selected from the existing staff at the University and trained to deliver the course contents.

168. One of the underlying causes for vulnerability in Somalia is the lack of management of natural resources and ecosystem services, which stems from poor land-use policies. Land degradation resulting from soil erosion, deterioration of physical and chemical properties of the soil, long-term loss of natural vegetation and conversion of forest to non-forest areas pose major threats to pastoralist and agro-pastoralist livelihoods. Present vulnerabilities will be exacerbated by temperature rise,<sup>39</sup> increased flooding and droughts and other climate impacts. The lack of institutional policies to deal with resource based challenges further exposes communities to climate change. Thus, building resilience of both human and ecological systems is an optimal way to deal with future uncertainties. Policies are required to institutionalize resiliency. Stakeholders in all three regions identified the need for an integrated policy which considers land and water resources as well as the various livelihood strategies that depend on the use of land, water and forestry resources. Thus, it is recommended that Land-use Policies be developed and implemented by a range of stakeholders. Land-use policy and planning offers a no-regrets approach to climate change. The key to successful implementation will be a broad consultative design process for the policy, community mobilization and participation from the

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<sup>38</sup> UNDP Sep 2011. *Blending Climate Finance Through National Climate Funds A Guidebook for the Design and Establishment of National Funds to Achieve Climate Change Priorities*

<sup>39</sup> Hartmann. I., Sugulle A., Awale, A., Nov 2009. *The Impact of Climate Change on Pastoral Studies of Somaliland. Candlelight Report on the Environment.*



policy formulation stage, legal and regulatory frameworks, and clear roles and responsibilities. Each zone will have its own land-use policy. The LDCF1 project will ensure that these and all policies create or updated integrate the role of climate change on vulnerability, particularly on women.

169. A reactive emergency response approach has remained the predominant way of dealing with disasters in Somalia till now. The awareness and coordination of policy makers, media, civil society, NGOs, UN agencies and other stakeholders remains low about disaster risk management. There is no national policy for DRR in South-Central, a major hindrance to effective action. The other two zones have draft frameworks and contingency plans, but these are yet to be put into effect. In order to effectively reduce drought and flood risk, a disaster risk reduction policy will be developed in South-Central zone and a resource mobilization plan for its implementation initiated by developing a comprehensive Project Proposal. Similar to the development of the UN Joint DRM program prepared for Somaliland, a holistic document that clearly defines the capacity needs and investments required would help the Federal Government to mobilize international funding for DRM. Through the LDCF, an interagency, multi-sectoral capacity assessment will be carried out and will put forward clear measurable actions to strengthen and maintain preparedness capacity. A systematically coordinated and comprehensive capacity analysis will be completed, focusing on high risk and climate vulnerable areas. The assessment will include stakeholders from government and civil society.

#### Federal Somalia Disaster Risk Management

170. In the selected districts in South-Central of the LDCF1 project, the major hazard is flooding around the Shabelle River and also recurrent drought. Given the very limited capacity of the SDMA, the LDCF1 will not only build the capacity of SDMA, but will focus on strengthening DRR capacities in the line ministries of Water and Energy, Agriculture, and Livestock. Disaster preparedness and mitigation training will include addressing man-made hazards that exacerbate climate hazards. For example, the deterioration of infrastructure along the Shabelle, which are almost all dysfunctional have contributed to increased flood disasters causing socio-economic and environmental devastation. Moreover, poor regulations on forest protection have led to heavy losses of topsoil and thereby increased erosion and siltation of canals and riverbeds. Sectoral studies undertaken will provide the basis for each ministry to create DRR strategies. A DRR Specialist, who will be based at SDMA, will work with each line ministry to provide workshops and training materials on topics such as hazard assessment tools, vulnerability mapping methodologies, disseminating climate information, and climate-proofing of infrastructure and investments.

#### Somaliland and Puntland Disaster Risk Management

171. For Puntland and Somaliland, the ministerial staff at regional and district level will be trained in drought and flood impact indicators. As mentioned previously OXFAM and FAO will establish commonly agreed indicators for drought and flood impact monitoring. Those commonly agreed indicators will be used for training the ministerial staff at regional and district level. There will be weather indicators and impact indicators. Weather indicators shall include: rain, wind and temperature. Impact indicators shall cover: i) food and nutrition, ii) water, iii) fodder, iv) human disease/HMIS data, v) animal disease, vi) locust attacks/invasions, vii) education and school attendance, viii) rangeland/pastor conditions, ix) displacement/migration, x) market prices of food and fodder, and xi) coping mechanisms.

172. To put drought warnings into action, a Climate Monitoring and Early Warning Systems Centre (CMEWS) will be established at HADMA and at NERAD to produce early warning products and communicate them to stakeholders in a timely manner. Given that most natural hazards in Somaliland and Puntland are climate oriented, with drought being the most severe and slow-on-set disaster, the government led early warning systems require significant improvement in order to minimize risks of such disasters. Currently, HADMA and NERAD use rudimentary methods to warn the Puntland and Somaliland communities such as with occasional messages by telephone and radiophone; however, communication is inadequate in terms of coverage and speed. There appears to be significant work on disaster risk and monitoring of potential hazards amongst the traditional communities in Puntland and Somaliland, however there is no centralized unit where this information can be brought together to determine a multi-hazard risk assessment, look at economic impacts, and

support the issuing of early warning alerts and declarations of states of emergency. Links between the scientific community and traditional knowledge and at-risk communities need to be strengthened.

173. The CM/EWS Centres in Puntland and Somaliland and SDMA in South Central would consolidate hazard monitoring information and bring this to the attention of appropriate government officials, as well as to communicate reliable early warning messages to at-risk communities. The units will also be charged with receiving inputs from communities who are monitoring traditional early warning indicators at ground level. Testing of early warning systems and message dissemination systems will also be conducted, and linkages to regional early warning mechanisms will be developed. This institution could also be charged with conducting lessons learnt exercises and disaster response reviews on a systematic basis.

174. Critical technical staff will be provided to the CM/EWS Centres and to support SDMA, including one hydro-meteorological expert. A crucial role of the experts will be to produce risk analysis, early warning, and perform coordination functions; e.g. organize contingency planning and post disaster assessments. They will also design DRR policies, guidelines and conduct DRR trainings for ministries, regional disaster management committees and communities. Initially these specialized experts will be deployed for the programme implementation period with gradual absorption of these experts in the government institutional setup. Based upon results of negotiations with the government and situation on the ground, decisions for absorbing these experts in the government system will take place during the course of project implementation. A gradual tapering out of this support will also help in ensuring that institutional sustainability is achieved over the course of the project.

#### Empowering Somali Women (All zones)

175. Component 1 will also be used to increase the representation of women in decision-making and strategy development. Training and workshops on managing climate adaptation projects and on the basic principles of climate change and gender-sensitive adaptation will be provided to women. Women will also be supported to represent Somalia in international and regional climate negotiations, conferences and events. University women will be able to gain knowledge on climate change and gender-sensitive adaptation. In fact, women from each zone will be supported financially to attend programmes with updated climate modules.

176. Furthermore, the National Climate Change Policy and National Disaster Management Policy to be developed will account for the gender dimensions of climate change. Also, each ministry will be responsible for placing an emphasis on the gender aspects of adaptation into existing sectoral policies, plans, laws and regulatory frameworks.

Table 3: Indicative Activities per Output for Component 1

<p><b>Component 1 Enabling Policies, Institutional Frameworks and Government Capacities (USD 2.02m)</b></p>
<p><b>Output 1.1 :</b> National and sub-national institutional knowledge on integrated land and water management principles under conditions of climate change and on ecosystem based approaches to climate adaptation is increased</p>
<p><b>1.1.1:</b> Training and workshops to build capacity in managing climate adaptation projects for 60 government officials (30 from Federal Somalia, 15 from Puntland and 15 from Somalia, 30% women) from the Ministry of Petroleum and Mineral Resources (MoPMR), Ministry of Somali Planning and International Cooperation (MoSPIC), and Somali Disaster Management Authority (SDMA) (South-Central) Ministry of National Planning and Development (NP&amp;D), Ministry of Environment and Rural Development (MERD), National Environment Research and Disaster Preparedness and Management Authority (NERAD) (Somaliland), Ministry of Environment, Wildlife and Tourism (MoEWT), Humanitarian Affairs and Disaster Management Authority (HADMA) and the Planning and International Cooperation (P&amp;IC) (Puntland), in public administration including topics such as project planning, management and monitoring, Performance Monitoring Systems, budget processes, accountability mechanisms, etc.</p>
<p><b>1.1.2:</b> Training materials developed and workshops conducted on the basic principles of climate change and gender-sensitive adaptation such as briefing notes, fact sheets, presentations, guidelines for mainstreaming climate change into sectoral policies and climate risk screening tools. These will be disseminated and used to deliver 3 training workshops for 150 participants (70 from Federal Somalia, 40 from Puntland and 40 from Somaliland, 30% women), for relevant government institutions (i.e., ministries of environment, planning, agriculture, livestock, rangelands, water, women’s affairs, HADMA, NERAD, SDMA, etc.) on the basics of climate change, climate vulnerability, ecosystem based climate adaptation, decision support tools and on mainstreaming climate considerations into sectoral policies. In addition to workshops, on-the-job training will be carried out by placement of a Climate Specialist within the concerned ministry of environment in each of the zones.</p>
<p><b>1.1.3</b> Climate Module with sub-modules developed and offered by the University of Hargeisa, Puntland State University and one University in South Central, to be decided after a brief assessment. The modules will focus on climate change, gender-sensitive and Ecosystem-based adaptation as well as integrated land and water management to ensure future men and women professionals working in the disciplines of environment, agriculture, natural resource management and public administration are educated on climate change. The modules will be designed to be integrated into existing degree programs such as agricultural, natural resource management, planning and public administration degrees or other relevant areas of study.</p>
<p><b>1.1.4</b> Nine national students, (5 from Federal Somalia, 2 from Puntland and 2 from Somaliland, including 1 woman from each zone), supported to attend environment/natural resource management higher degree programs and have Climate Change mainstreamed into their programmes of study. A scholarship requirement for all recipients will be that they work within Somalia for the first 2 years after graduating.</p>
<p><b>Output 1.2 :</b> Sectoral analyses of climate risks, vulnerability and gender dimensions of climate change are completed by Government Departments to facilitate mobilization of long-term financing for Climate Change Adaptation</p>
<p><b>1.2.1:</b> Detailed sectoral analysis of climate vulnerabilities and the socioeconomic and gendered impacts of climate change on each sector prepared for water, agriculture, livestock and energy sectors in coordination with the IGAD Climate Prediction and Applications Centre<sup>40</sup> and FAO SWALIM. The concerned ministry for each respective sector will prepare the sectoral study which will include the development of scenarios for the impact of climate change on grasslands, vegetation, water, agricultural production etc., climate impacts, analysis of land-uses and priority areas for action.</p>
<p><b>1.2.2:</b> Each ministry integrates climate change, placing emphasis on the gender aspects of impacts and adaptation measures, into existing sectoral policies, plans, laws and regulatory frameworks and ensures appropriate representation of the sectors in the National Climate Policy, South-central Land-Use Policy, Somaliland Land-Use Policy</p>

<sup>40</sup> <http://www.icpac.net/>

and the Puntland Land-Use Policy.

**1.2.3:** The Planning Ministries are supported to carry out a study to identify a mix of financing sources to mobilize funds for Climate Change Adaptation (e.g., to capitalize the Somali National Development Fund). Funding will be documented in various annual development plans including the next 5-year Puntland Development Plan and the Federal Government's Annual Work Plan, by exploring both the international climate change financial landscape as well as domestic financial resources from taxes.

**Output 1.3 :** Policies, regulations and frameworks for the protection, conservation and management of land and water ecosystems under conditions of climate change are developed, reviewed and revised

**1.3.1:** A National Climate Change Policy is developed, taking into account the sectoral vulnerabilities, gender dimensions of climate change, impacts and costs for adaptation. The policy will include information on investment, financial flow and adaptation economic analysis of different medium- to long-term adaptation options to assess the burden of climate change on the public budget by conducting a Climate Public Expenditure and Institutional Review (CPEIR) and assessing the barriers for financing adaptation in the country. Scenario analyses will analyse cross-sectoral impacts, the sources of funds (e.g. private, public, donor, etc.) and the maximization of co-benefits (e.g. employment creation and adaptation needs). The policy will consider all zones of Somalia and will provide specific sections and recommendations for each zone.

**1.3.2** Representation of Somalia in international and regional climate negotiations, conferences and events that promote South-South cooperation. 9 relevant and LDCF trained government officials (5 from Federal Somalia, 2 from Puntland and 2 from Somaliland, at least one woman per zone) will be supported to attend, participate and represent Somalia's interests in climate discussions and negotiations.

**1.3.3** Establishment of Land Policy Development Teams within the Land Planning Units of the Ministries of Planning. One international (preferably of Somali origin) expert on land use planning will be hired on a periodic basis for technical input. LDCF funds will be used to support a Policy Development Coordinator to support each of the Development Teams.

**1.3.4** Development of Land-Use Policies that are based on principles of integrated land and water management and integrate climate change concerns in each zone.

**1.3.5:** Technical surveys carried out, in collaboration with SWALIM, to establish an updated baseline for land-use reports for each zone.

**1.3.6** Development of a database and information management system to inventory land-use patterns and activities. This will include provision of IT infrastructure, Database Specialist and training of the Ministries of Planning to maintain the database.

**Output 1.4 :** National and regional Disaster Risk Management institutional capacities are reinforced to produce early warning products and to disseminate early warnings

**1.4.1** Preparation of a gender-sensitive National Disaster Management Policy, with clear roles and responsibilities defined and a comprehensive survey of the capacity needs for managing disaster risks. A DRR Policy Advisor will be hired for 3 months and placed at the MoPMR and will work with SDMA and line ministers for the development of the policy.

**1.4.2** Development of a comprehensive Program Document/Capacity Needs Assessment for the DRM sector in Puntland. This will include systematic analysis of gaps in capacity in technical, financial and HR capacity and will be multi-sectoral in nature. (Puntland).

**1.4.3:** Establishment of Climate Monitoring and Early Warning Systems Centre for the production and dissemination of early warning products to communicate in a timely manner. The Centres will be responsible for producing Somali and local language versions of forecasts and early warnings produced by other agencies. They will also be responsible for the dissemination of climate information and early warnings to government institutions, District Disaster Committees and communities. (Puntland and Somaliland) Appointment of ministry focal points to disseminate relevant warnings. (South Central)

**1.4.4:** Training for the CM/EWS centres and the SMDA staff. A DRR Capacity Development Expert will assist each zone. The DRR Capacity Development Specialist will be responsible for training of national government staff, civil society organizations, local government officials, and communities. The role of the CM/EWS centres and SDMA will be to carry out Disaster Risk Reduction and early warning dissemination including testing of the EWS and message dissemination systems.

**1.4.5:** Provision of warning communication equipment for CM/EWS centres in NERAD/HADMA and for the CM/EWS focal points within SDMA in South Central.

## **Component 2: Piloting Ecosystem Based Adaptation strategies**

**Outcome 2:** Models of community and ecosystem resilience developed and implemented in pilot areas selected in consultation with government and community stakeholders.

### *2.4.3 Baseline Component 2 - Without LDCF Intervention*

177. Water is one of the most crucial natural resources for the communities in Somalia. A study in 1998 by UNICEF on access to water in Somalia underscored that, —a relatively small proportion - probably less than 20% of the total population - was believed to have access to water throughout the year; albeit with significant regional variations. The target districts for the proposed project, at present, are water starved, and climate change threatens to create greater water scarcity during times of drought. NAPA consultations in 2013 indicated that the major underlying cause of poverty and the leading hazard faced by all zones is the rising frequency of drought. In fact, a majority of settlements (e.g., up to 92% in the target districts) have reported loss of assets due to drought. Additionally, the pattern of the rainy seasons is changing with time and the frequency and amount of precipitation is becoming more unpredictable. Prolonged periods of rain and flash floods are frequently experienced. According to a UNDP survey, 73.5% of households in the Lower Shabelle region of South Central were affected by floods between 2000 and 2010.<sup>41</sup>

178. In spite of experiencing rainfall, none of the target communities have the knowledge and capacity to harvest and store the water for use during the dry season. Women and youth often have to walk for long distances in search of water and pasture for their livestock. This has resulted in boys and girls not attending school and women having to leave their children alone at home. Women and youth are also often attacked while in search of water and while fetching firewood.

179. Overall, stakeholders of the NAPA consultation sessions indicated that there is an awareness amongst communities that climate has been changing in the past few decades. Most community members cited the increasing frequency of droughts and floods, and rising temperatures as indicators of climate change. However, communities do not understand how poor land and water management can exacerbate climate change impacts. Rural populations simply do not know how to respond to the uncertainty in the climate. Though some limited sustainable land management practices are taking place in surrounding communities due to initiatives such as PROSCAL, the EU MDG programme and PREP (see Section A.4), for the most part the communities lack the knowledge and capacity to protect and manage their natural resource base and the ecosystems upon which their lives and livelihoods depend.

180. Land degradation due to overgrazing, deforestation and poor land-use planning has exacerbated the impacts of droughts significantly. The most common sustainable land management practices include soil bunds, water harvesting, and gully stabilization. Most of these responses are located around the main agro-pastoral systems where loss of topsoil, nutrient decline, and water scarcity are predominant issues. For example, through the MDG initiative funded by the EU, Adeso, an NGO acting as one of the implementing agents, has begun work in 30 villages across Puntland to rehabilitate rangelands and promote soil and water conservation practices. Through the MDG initiative, community based projects are being implemented including reforestation of the grazing lands with suitable and adapted tree species, construction of barriers, small dams and soil bunds to slow down water flow leading to erosion, rehabilitation of existing dams and water ponds, control of growing gullies and rehabilitation and reduction of grazing pressure on pastures. Similarly, the UN Joint Programme for Sustainable Charcoal Production and Alternative Livelihoods is one of the key programs helping the government and communities of the region to curb deforestation through sustainable land use management.

181. However, in spite of such examples by the EU and the UN as well as other organizations and donors tackling the issue of land degradation, sustainable land management practices are scattered and insufficient to cover the considerable breadth of damage throughout Somalia. In fact, according to the

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<sup>41</sup> Community Census: on Poverty Versus Socio-Economic Indicators, South Central Zone, Report 3, UNDP, 2010.



Country Report on the Millennium Development Goals 2013, there has been an 18.5% decrease in land area covered by forest between 1990 and 2010.

182. Additional hazards faced by the communities include the inability to prepare for droughts and floods. There are no district level, or community level, disaster management capacities. Currently, if early warning information in communities, it is usually passed on in a very ad-hoc manner by leaders to others through SMS or word of mouth. There are also no disaster committees or plans for preparation of droughts and floods. Consequently, communities are rarely forewarned about extreme events. For instance, the Burao district in Somaliland reported that 27% of the settlements in the district were affected by unforeseen floods which caused significant displacement of people and loss of livestock. A prime example is the flood of October of 2007, along the Shabelle River in South Central where the flood swept through thirty villages, destroying significant farm land and crop stores and causing hundreds of families to flee their homes. Without any community-based warning system, many small villages in the vicinity were completely cut off.

183. Another hazard voiced by respondents to a UNDP survey carried out in 2008 included the lack of high agricultural input costs.<sup>42</sup> Drought resistant seedlings are limited in all zones, in spite of the fact that all zones are drought-prone.

### South Central

184. The South-Central region is largely characterized by three distinct physio-geographic zones which include: 1) the central coastal plains, with a wide sand dune system; 2) a broad limestone-sandstone plateau covering all of central and southern Somalia; and 3) the flood plains of the Juba and Shabelle rivers in the south, which provide the highest agricultural potential. Both these rivers, as well other main Somali drainage networks, have their headwaters in the neighbouring countries of Ethiopia and Kenya, and are most affected by the rainfall from these territories.

185. Land use in most of central Somalia consists mainly of grazing and wood collection for fuel and building. In the south both rainfed and irrigated agriculture are practiced, especially in the riverine areas of the Juba and Shabelle rivers. Current estimates are that over 70 percent of the arable lands are utilized for rain-fed crop production. The Juba and Shabelle rivers flow year round and their seasonal flooding enable South-Central Somalia to be the main crop producing area and support the highest concentration of livestock. Small scale subsistence farmers use spate and controlled irrigation and grow crops on receding flood waters, while larger commercial farms employ irrigation systems that rely on pumps and storage reservoirs that are filled during periods of peak flow. Crops are also grown under rainfed conditions in the region. It is estimated that 1.25m ha is reasonably suitable for cultivation (FSNAU)<sup>43</sup>. Crops grown under in the area include sorghum, millet, maize, groundnuts, cowpeas, beans and cassava. Access to inputs and extension services has been disrupted in many areas. Historically, the state has been the source of agricultural inputs with the private sector not willing / able to compete. With the collapse of the central government the private sector has become more active though still on a limited basis. Policy, regulations and management are weak or absent and access to credit and markets is difficult thus limiting returns to productivity.

186. Even though most of Somalia's fresh water resources exist in the Juba and Shabelle rivers, both river basins are water deficient. Water supplies for domestic purposes are unreliable and not well distributed due to poor infrastructure. Groundwater potential is limited due to limited recharge rates. Water supplies since the outbreak of the war in 1991 are run by unregulated private entities with no common vision or coordination. Water management, on and off-farm, is weak in the absence of water use planning, regulation and management. Small irrigation groups practice a low level of localized on-farm water management but in the absence of a central authority with a sound strategy and management framework, authority and manpower capacity, the region will remain prone to flooding, inefficient water use, salinization and water logging. Commercial irrigated farming has been greatly affected by the security situation. On-farm infrastructure has not been used nor maintained and some

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<sup>42</sup> UNDP Poverty Profile 2008: Participatory Community Census for Poverty Assessment and Mapping: Nugaal.

<sup>43</sup> Food Security and Nutrition Analysis Unit: Somalia: [www.fsnau.org](http://www.fsnau.org)

has been destroyed by floods. The once thriving banana (formerly the second largest export), melon and fruit production/export business has disappeared although there have been attempts to revive it.

187. Other surface water mobilization infrastructure includes earthen-lined dams. Unlike northern Somalia where berkads are very common, southern people prefer to use *wars*<sup>44</sup> for rainwater harvesting. The main reason for this is the favourable clayey soil type for the construction of wars. Clayey soils favour the construction of wars, however, they sometimes have to be lined up with plastic sheets to prevent water loss through seepage. In cases where the source is lined, the storage period is known to increase by up to two months due to reduced seepage. The sizes of wars vary depending on manpower available in villages for their construction. Water can last up to six months, depending on the lining material and consumption rate.<sup>45</sup>

188. Water resources management of the two rivers involves two major issues, namely flood management and irrigation water supply. The high floods in the Juba and Shabelle Rivers inundate scarce cultivated land along the river course regularly. The continuing deterioration of the flood control and river regulation infrastructure, coupled with unregulated settlement in flood plains and the recent practice of breaching river embankments to access water for wild flood irrigation, have increased the vulnerability of the riverine communities to progressively smaller peak flows. The deposition of high sediment yield of the river course confined within embankments has raised the bed level over the years. Hence, the river banks are regularly breached and the areas surrounding the river courses both in the Juba and Shabelle Rivers are flooded every other year.

189. The current degradation of the environment started in the post-independence early years when government management and regulation weakened or stopped. Degradation accelerated with the collapse of the central government, the influx of “refugees” from less secure regions, changing weather patterns, unsustainable land use and increasing poverty. Over more than twenty years of disrupted governance and insecurity, the already inadequate management and protection of natural resources has collapsed almost entirely.

190. It should be noted that in some parts of South-Central continue to experience sporadic armed conflict, and have minimal access to basic services. The new Federal Government is making efforts to re-establish services, yet the regions of the South-Central zone remain as some of the poorest and vulnerable areas of the country.

### Puntland

191. The Puntland State of Somalia is a semi-arid region where livestock production constitutes most of the economy - over 60% of the population is sustained by pastoral livelihoods.<sup>46</sup> In 2005 UNDP estimated the population of Puntland to be approximately 6.8 million (out of whom around 350,000 were considered internally displaced). Pastoral livestock production systems, which contribute at least 90% to the total value of commercial and subsistence production,<sup>47</sup> are mostly found in Puntland’s vast arid areas. These areas are characterized by marked rainfall variability, and associated uncertainties in the spatial and temporal distribution of water resources and grazing land for animals. Pastoralists have developed management systems based on strategic mobility, which are well adapted to these difficult conditions, but are increasingly becoming futile due to rapid environmental degradation, climate change and growing urbanization. The last 8 rainy seasons in

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<sup>44</sup> *Wars* are unlined dug-out 2-3 meter deep water catchment structures with surface areas ranging from hundreds to thousands of square meters. They are dug by an excavator, which drops the materials to create a wall on the downstream part of the excavated area. Water is led by ditches to the war. Water retention time in a war is dependent not only on water usage, but soil type and condition as well. Proper site selection is therefore necessary for the war to be able to hold water for longer periods. Generally, wars have been somewhat unsustainable water sources because of siltation and maintenance problems. They are also not easy to organize and maintain at community level, especially when initially constructed by outsiders.

<sup>45</sup> Rural Water Supply Assessment, FAO-SWALIM, 2007

<sup>46</sup> [http://eeas.europa.eu/delegations/somalia/documents/press\\_corner/20131023.pdf](http://eeas.europa.eu/delegations/somalia/documents/press_corner/20131023.pdf)

<sup>47</sup> Ministry of Environment, Wildlife and Tourism, Invitation to Puntland Environmental Conference, April 2014.



Central Somalia have been below average,<sup>48</sup> resulting in severe droughts that have had devastating effects on pastoral livelihoods, hence, the rising numbers of malnourished children and hunger. Recurrent droughts in the region, combined with pervasive poverty, means that communities barely recover from one shock before being subjected to the next. Without sustainable resource management, it has been difficult to increase productivity to reduce the poverty and food insecurity of nomadic populations.

192. Puntland has some of the highest levels of land degradation in the country (FAO), and recent analysis shows that tree cover has reduced by an average of 2.8% per year between 2001 and 2006 (SWALIM), with 70% of total landmass affected<sup>49</sup>. Degradation of land and other natural resources is manifested in desertification, soil erosion, secondary salinization and waterlogging. In addition to the pressures on natural resources by pastoralist livelihoods, the underlying causes of land degradation include lack of awareness on the rate of desertification, charcoal trading and unregulated settlements, all of which have also put a heavy strain on local woodland resources, making them more vulnerable to the effects of climate change. In recent years, gully erosion has destroyed important valleys creating deep gorges that often restrict mobility of both pastoralists and their animals.

193. Water is also a critical resource that is under threat in Puntland by a combination of factors including poor management, lack of infrastructure, degradation and climate change. Water scarcity has been one of the main traditional sources of social conflict in Puntland. Puntland is considered seriously water-stressed zone because of its arid environment. The people of Puntland rely heavily on groundwater for most of their water needs, due to a lack of reliable surface water sources and no perennial rivers. However, both permanent and seasonal water sources exist. The permanent water sources include natural springs, oases, boreholes and some relatively deep hand-dug wells, while seasonal sources comprise man-made earth dams (waars), berkads and natural depressions.

#### Somaliland

194. In Somaliland, agro-pastoralism and pastoralism are the most important sources of livelihoods. Agro-pastoralism ranges from farmers owning large herds but keeping only a few resident animals on the farm to small scale-farmers owning only a few animals. Agro-pastoralists are increasing in number because traditional nomads can no longer rely on livestock alone for their livelihood, given the fact that pasture land has diminished and deteriorated over the years.

195. The agricultural system in Somaliland is predominantly subsistence in nature. The principal crops are sorghum and maize grown mostly for household consumption. Fruit and horticultural farming, which is relatively small, is mainly commercial. Rain-fed farming accounts for 90% of the total area cultivated, while the area under irrigation constitutes only 10%. The sector is dominated by smallholder farmers who tend small farms ranging from 2 to 30 hectares in area. The size of the average farm is approximately 4 hectares.

196. Pastoralism is the dominant livelihood in arid regions. In spite of dwindling grazing areas, the pastoral livelihood contributes significantly to the Somaliland economy. Livestock production has historically and culturally been the mainstay of livelihood for the majority of the people in Somaliland. Livestock production contributes 60% of the GDP and about 85% of foreign export earnings. According to Somaliland in Figures (Ministry of National Planning and Development), there were 18,570,000 head of livestock in the country as a whole in 2009.<sup>50</sup> It is assumed that this figure is only a rough estimate given the porous borders and considerable internal and cross-border movement.

197. Due to their dependence on natural resources, both pastoralism and agro-pastoralism are climate sensitive and have proven to be extremely vulnerable to climate change. The impacts of

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<sup>48</sup> EU-funded Food Security and Nutrition Analysis Unit (FSNAU) - Emergencies and relief type operations in Somalia rely on the information that is provided by FSNAU. The programme has been financed by the EU since 1994, though is now a multi-donor programme.

<sup>49</sup><http://adesoafrika.org/wp-content/uploads/2012/09/Your-Environment-Is-Your-Life-Project-Profile-Final-October-2013.pdf>

<sup>50</sup> National Development Plan, 2012-2016, Somaliland Ministry of National Planning and Development.

climate change have compounded land degradation due to overgrazing, deforestation and poor land-use planning. The impacts of land degradation on the ecosystem services are significant and include loss of animal/plant products, food and livelihood security, soil cover, regulation of water, and biodiversity. According to the NRM Survey Baseline Report carried out by the EU, the Nugaal district of Somaliland is severely affected by land degradation; 46% of the land has been degraded due to overgrazing of pasture land, 28% due to deforestation, 22% due to soil and gully erosion, and 4% due to invasive species. Massive deforestation has also taken place throughout Somaliland, particularly in search of trees to produce charcoal.

198. Water availability in Somaliland is primarily more dependent upon underground reservoirs rather than on surface water bodies, as there are no major rivers or other permanent surface waters in the country. Earth dams are commonly used to trap surface runoff while springs and berkads are prevalent for water supply. Surface water supply in Somaliland is mainly dependent on rainwater during the two rainy seasons (April to June, and September to November).

199. The local communities in Somaliland have adopted different means of coping with water shortages. In addition to the above-mentioned surface water sources, some agro-pastoralist households harvest and store rainwater in underground ditches with capacities of about 6 m<sup>3</sup>, resembling berkads. The ditch is lined with a plastic sheet to prevent water from percolating into the soil. The water is used for household consumption and in some cases for irrigation. Twenty-litre jerry cans are also commonly used to store water in rural areas, as opposed to big plastic drums common in towns.

200. Investigations done by Faillace (1986) and Sogreah (1983) classified Somaliland into four hydrogeological zones, namely the mountainous zone, coastal belt, sloping plain and the plateau zone. Government consultations indicated a need in the plateaus for water and land management. The Hawd plateau was selected for the focus of the LDCF1 project interventions in Somaliland. The Hawd plateau has potential for some of the best grazing lands in the region and rehabilitation of these areas would have a large impact on pastoral and agro-pastoral livelihoods. The selected region falls within three drainage basins, including the Gulf of Aden, Togdheer/Nugal, and Ogaden Basins.

201. Berkads are the major water sources in the Hawd plateau since there are no permanent water sources there. There are thousands of berkads of various sizes in Wooqooyi Galbeed and Togdheer regions, with more than 5,000 in the latter.<sup>51</sup> Evaporation accounts for significant water loss from berkads due to the high temperatures experienced in Somaliland. To reduce loss, local people cover berkads with locally available material e.g. tree branches and shrubs. The rate of berkad failure is very high. It is reported that in almost all districts less than 50% of berkads are functioning, and this is by and large attributed to poor construction practices.

202. The Hawd plateau and the northern water basins in general area characterized by a large number of small streams (toggas) which are mostly ephemeral and originate from the mountainous areas in the north-west (above 2000 m elevation) and flow to the coastal areas of the Gulf of Aden. This water can be used by communities through simple gabion-type structures (check dams) that divert the water into adjacent lands for infiltration or surface storage.

203. The Haud south of Hargeisa is covered mostly by a semi-arid woodland of scattered trees, mainly acacias, underlain by grasses that include species especially favoured by livestock as forage. The growing market for charcoal, most notably in the Gulf States, couple with domestic demand for fuel wood, has led to massive deforestation in Somaliland as a whole, and especially in the Hawd plateau. Even without this burgeoning industry, Somalia's forests have come under threat in the last 20 years: since 1990, forest cover has been continually shrinking over time, while natural forest regeneration has been slow due to the arid climate and weak public policy support. More recently, the use of acacia trees for charcoal production has put stress on forest-related resources on which pastoral livelihoods depend. This economically-driven deforestation is likely to continue as long as the charcoal industry serves as a lucrative livelihood. The increasing loss of the natural resource base throughout Somalia is a key contributing factor in causing humanitarian crises in the country. The centuries old coping strategies employed during periods of drought in the arid/semi-arid climate of

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<sup>51</sup> FAO SWALIM Rural Water Supply Assessment (2007)

Somalia are increasingly become impractical as resource depletion removes the natural resource assets which are heavily relied upon during drought events. The evergreen drought-tolerant indigenous vegetation species that provide feedstock to pastoralists has been lost to the demands for charcoal.

#### Choice of sites

204. Using a number of selection criteria and government priorities, eight districts have been selected for implementation of projects. The selection criteria included the extent of land degradation, flood extent, high population, existence of other development partners, security situation and access. Government consultations further narrowed down the geographical focus of the project. Many of the interventions will benefit entire hydrogeological zones, while pilot activities such as district level adaptation plans and demonstration sites for soil and water conservation and other sustainable land management practices will be implemented in the selected districts. Given the high vulnerability, coupled with the much larger land area of South-Central as compared to the other two zones, LDCF funds will be used to support 4 of the 8 districts in this zone. Details on these districts are provided in Annex 7.

#### *2.4.4 Adaptation Alternative Component 2–With LDCF Intervention*

205. To address the various problems that the communities within all zones are faced with, activities under Component 2 will focus on building the resilience of communities and ecosystems through community development and planning and implementation of ecosystem based adaptation measures. The activities will address all top four NAPA priorities on land management, water mobilization, disaster risk management and water diversion. The regions aforementioned (Nugaal and Bari in Puntland; Toghdeer and Wooqi Galbeed in Somaliland; Galgaduud, Middle Shabelle and Lower Shabelle in South Central) and described in detail in Annex 7 will benefit through the demonstration of planning tools, technologies and approaches for Ecosystem based Adaptation. Awareness on climate change and its likely impacts will be developed and communities will be supported to understand risks and methods for addressing them, encouraging a more proactive and less response-oriented approach to climate hazards. The three regions will serve as models for climate sensitive investments into water mobilization, agriculture, forestry, and management of climate and disaster risks.

206. As a first step in the LDCF1 project, grassroots Community Based Organizations (CBOs) will be supported, established or re-established where they have become defunct. This will build the crucial foundation required for implementing all of the activities under Component 2. The delivery of goods and services by local NGOs, through the support they receive from international NGOs that nearly always involve local NGOs or local CBOs in their activities, have resulted in a greater legitimacy of local organizations in front of communities, and in their capacity to gain their support. In all the regions, there exist various functional and non-functional social groups. Many of these groups provide a platform for community-based decision making and deliver governance functions or provide other social and economic support mechanisms.

207. Many of these groups do not have the knowledge and capacity for planning and managing an organization and require capacity building in basic organizational management. Also, these groups may not be socially inclusive, and it is important to set-up inclusive and representative entities with which the LDCF1 project implementation team will primarily interface with for planning, implementation and M&E. The LDCF1 project will require a focal institution with which to work with on community based adaptation strategies, and one that represents all members of the communities. These CBOs will also be crucial for the long-term sustainability of the project activities. A local NGO will be hired to either revive or create CBOs that represent villages and settlements that are stakeholders of the LDCF1 project. Existing institutions will either be strengthened or combined to create the CBO. Consultations with stakeholders, including both men and women indicated that a CBO with both women and men members is culturally acceptable, and in fact desired. The project

will assist the CBOs in registration, setting up a Board, constitution and other governance and administrative structures. Training will be provided on basic organizational management, training methodologies, consensus building, and community-based, gender and socially equitable participatory natural resource management planning. This activity will be one of the first activities to be implemented under the LDCF to ensure community participation in design, implementation and monitoring of the LDCF activities.

#### Agro-Pastoral Field Schools (APFS)

208. Much of the ecosystem degradation and vulnerability of Somali communities stems from a lack of awareness and knowledge on natural resource management of grazing areas. Though these communities have in the past employed a range of effective practices, with the introduction of new socio-economic forces, population growth, climate change and changing sociocultural patterns – many of these methods are no longer appropriate. A field school approach is an ideal way to adapt existing knowledge with new insights, as it is designed for community managed learning and experimentation which provides an adaptation platform where groups of pastoralists systematically discuss their social, economic and ecological issues on a regular basis. The overall Agro-Pastoral Farmer Field School (PFS) process is guided by a learning curriculum developed in participatory approach tailored to seasonal livelihood activities and challenges. In its application, the APFS concept is envisaged to contribute to improved livelihoods of the pastoral communities through creating unity, poverty reduction and strengthening of pastoral institutions thus leading to improved preparedness and reduced vulnerability to drought and other crises like flooding etc.

209. APFSs will focus on developing people's capacities through season-long participatory training. Areas for training include water conservation, subsurface dams, shallow wells, valley catchment, drought resistant crop varieties, backyard gardening, bunds and infiltration channels for retention of rain water, animal diseases control, livestock production systems, amongst many other topics.

210. The initial activities will involve training of facilitators and development of curriculum in partnership with the communities. The curriculum and training will ensure that knowledge on climate impacts and adaptation best practices are included. A local NGO, government extension workers, or community member will be trained as the facilitator for each APFS. Meetings with the pastoralists must take place regularly and for an extended period of time for the APFS to be successful. Other activities will include NRM planning workshops, baseline mapping of civil society and extension services, experience sharing workshops and other training as identified by the APFS such as in livestock diseases, marketing of livestock products, etc.

211. Other activities will include NRM planning workshops, baseline mapping of civil society and extension services, experience sharing workshops and other training as identified by the APFS such as Soil and Water Conservation practices. Once the APFS are set-up, the CBOs in the area will work with the APFS to select, design, construct and maintain small-scale community infrastructure that will improve livelihoods and maintain ecosystem services. The communities will contribute 20% of the project costs through financial or in-kind contributions. The infrastructure will include irrigation canals, soil bunds, gabion walls, etc. as per community identified needs and in line with adaptation strategies.

#### Technical Studies (all zones)

212. Given that there is very little technical information for the regions, technical studies at the watershed and sub-watershed level are required to inform land-use planning, infrastructure design and ecosystem based adaptation. A detailed study with up-to-date information on the Shabelle River basin is required. Studies will look at geomorphology, surface water runoff and infiltration rates, water quality, etc. and will also do an accounting of existing infrastructure and the status. An international engineering firm preferably having experts of Somali origin and with expertise in hydrological modelling will be employed to carry out the studies. The consulting firm will work closely with FAO-SWALIM and use their expertise and information where possible. These studies will provide an informed foundation upon which to develop water harvesting infrastructure, land-use plans and

adaptation plans. The design of the studies will be carried out in collaboration with MoEWT, Ministry of Water, Hargeisa Water Supply and Ministry of Agriculture (Somaliland); MoEWT and PSAWEN (Puntland); and MPME and Ministry of Water and Energy (South Central) to ensure that the informational gaps are filled. The studies will then be used to develop Climate Adaptation Plans such as for the Shabelle Basin in South Central. This will be led by an International Expert (with preference given to an expert of Somali origin) in Climate Adaptation, who will be hired for a period of one year to compile the technical information, as well as carry out stakeholder consultations for developing the watershed level adaptation plan.

#### Community based DRM (all zones)

213. District Disaster Management Committees (DDMCs) will be established in each of the project districts. Master trainers will be trained within the DDMCs who will be responsible for training village level CBOs in disaster risk management. The DDMCs will also be responsible for developing district level DRM plans, stockpiling emergency supplies, setting up a transparent resilience fund, and disseminating early warnings to the village level. LDCF funds will be used to establish eight DDMCs to serve as examples for replication and scaling up by the relevant authorities. An NGO will be hired to establish committees with equitable representation of the community, ensuring adequate outreach and representation for women within the committees at decision-making levels. The NGO will provide the DDMCs with training on community-based early warning systems, climate change impacts, carrying out damage and needs assessments, carrying out vulnerability assessments and other relevant topics. The DDMCs will be responsible for developing district level DRM plans with climate change integrated into the plans. The DRM plans would build upon 1) results from technical studies, 2) local government and community consultations for adaptation planning, 3) hazard maps for each district and 3) a detailed baseline study and survey carried out by the local NGO for both districts on the socioeconomic conditions, infrastructure and services, livelihoods, gender roles, land-use patterns, climate vulnerability (exposure, sensitivity and adaptive capacity) and an inventory of ecosystem functions. Each disaster authority will ensure linkages and communication systems between the committees at the district level and their regional and national offices.

#### Feasibility assessments for project interventions (all zones)

214. Through the LDCF1 project, a feasibility study and environmental impact assessment will be carried out to ensure suitability of the sites and to mitigate any environmental impacts. Many regions in all zones have high evaporation rates, and this will be taken into consideration while carrying out the feasibility assessments and designing the water mobilization infrastructure. Soil tests will be conducted to determine permeability. Other factors that will be considered will be to design appropriate dam depth to compensate for evaporation and leakage, well-compacting retaining walls and spillways, and placing protection on water sources to avoid contamination by animals or during flood events.

#### Flood management and water mobilization infrastructure (zone specific)

215. The LDCF1 will also invest in the rehabilitation of flood control and water management infrastructure and the improvement of flood control mechanisms with a view to reducing the incidents and scale of flood-induced humanitarian emergencies while also preparing for droughts.

216. The activities would include the following in each zone:

##### South Central

217. LDCF funds will be used to support the rehabilitation of 4 irrigation canals, rehabilitation and expansion of dams in all 4 target districts within South Central, and construction 8 new water diversion/flood routing structures, 2 in each district. Existing boreholes also need to be repaired, so funds will be used to rehabilitate 2 boreholes in Balanbale and 2 in Guriel.

218. The community consultations identified rehabilitation of canals in village Dayactirka Kanaalada of Afgooye and 2 major canals in Jowhar. These sites will be considered during the feasibility assessments. The diverted floodwaters will support activities such as tree nurseries, fodder production, crop production, livestock watering points, etc. These structures will have multiple



impacts on reducing vulnerability and enhancing resilience, including improved livelihood opportunities, flood protection and increased availability of water.

219. In South Central, the rehabilitation, new construction and maintenance would be managed by the Ministry of Water and Energy, but would have community ownership integrated into the project interventions. The LDCF1 project will work closely with the Ministry to ensure that infrastructures rehabilitated under the LDCF1 window are complementary to the work being carried out by the Ministry. The community will help to identify the sites for flood control, and will also contribute 20% of the cost either through financial contribution or in-kind through labour. This would ensure true ownership and the long-term sustainability of the projects.

220. With improvement in water provision technologies, a participatory design phase, and strong ownership by the Ministry of Water and Energy, it is expected that dams, with their high water holding capacities, will be much more sustainable than the current use of shallow unlined water catchments and berkads. Moreover, water availability will be improved for a large number of the population and is expected to drastically enhance the resilience of rural communities, particularly in drought prone areas.

#### Puntland

221. Dams are also in high demand in the Puntland region. Both the government and community see the construction of medium to large scale dams as a top priority for enhancing resilience. Similar to South-Central the use of wars and berkads have proven to be less reliable for the various reasons described above.

222. Communities and the MoWET have worked together to select two potential sites for construction of dams. In Bandar Bayal district, they have identified an area near Labagarday, which is located 45 kilometres west of Bela, and falls in between Bela town and Dhodo. In Dangoroyo, community representatives suggested a site near Libaho, located 25 km west of Dangaryo town. Through the LDCF1 project, a feasibility study and environmental impact assessment will be carried out to ensure suitability of the sites and mitigate any environmental impacts. The region has high evaporation rates, and this will be taken into consideration while carrying out the feasibility assessments and designing the structure. Soil tests will be conducted to determine their permeability. Other factors that will be considered will be to design appropriate dam depth to compensate for evaporation and leakage, well-compacted retaining walls and spillways, and protections of the water source to avoid contamination of use by animals. Moreover, clear plans for operation and maintenance of the facilities will be developed. This may also require training of the communities or relevant government staff.

223. Another important intervention will be the construction of erosion control/gully reclamation structures using cash for work in line with MoEWT supported rangeland management plans. Structural measures will include check dams and gabions that include loose rock, gabion and pole/brushwood constructed across the floor of the gully to reduce the channel gradient and then to slow runoff and to trap sediment. They will be constructed to facilitate the establishment of vegetation in the gully, which will eventually stabilize the gully and protect it from further erosion and rehabilitate the gully. Water diversions will support activities such as tree nurseries, fodder production, crop production, livestock watering points, etc. These structures will have multiple impacts on reducing vulnerability and enhancing resilience, including improved livelihood opportunities, flood protection and increased availability of water.

#### Somaliland

224. The Construction of small to medium earthen dams was prioritized by the communities in Somaliland. However, in general dams are not very common in Somaliland. This is mostly due to lack of suitable dam construction sites where leakage will be minimal, high costs of construction, limited machinery for construction, high maintenance costs due to silt removal and land degradation due to overgrazing as dams then to attract settlement in the surrounding areas. Thus, all of these factors must be taken in consideration when carrying out the detailed feasibility studies and environmental impact

assessment, and the LDCF1 project will ensure appropriate measures to tackle these challenges are put into place.

225. The MERD has identified the construction of 2 earthen dams along with distribution infrastructure (i.e., pumps, pipes, channels, etc.), both at approximately 50,000 m<sup>3</sup> in size. The locations include Baligubadle in Hargeisa District and Heere village in Burao District. The design will be based on detailed technical studies, Environmental Impact Assessments and consideration of future climate projections.

226. Flash-flooding is also a common occurrence in parts of Somaliland. In particular, the sole source of water for all of Hargeisa town, a large borehole plant, is under threat due to an adjacent seasonal river which is prone to flooding. Thus, a flood control project at Geed Deble in Hargeisa District involving the construction of gabion at Hargeisa water sources will be built. The design will be based on detailed technical studies, Environmental Impact Assessments and consideration of future climate projections. The project will be managed by the Hargeisa Water Authority (HWA). The project team will be composed of the project manager, civil engineer, field officer and three cashiers and will be led by the Project Manager who will be overall in charges of project implementation.

227. Smaller scale flash-flooding is also a serious climate impact faced by communities in Somaliland. Communities discussed the need for flood water diversion structures, which would also help increase livelihood opportunities due to water mobilization. Under the project, construction of 5 water diversion structures to control soil erosion and enhance livelihoods at 5 sites will be undertaken in the villages of Duruqsi, Balidhiig, Warabaye, Dhoqoshay and Warcibran in the Hawd plateau of Togdheer region. Water diversions will support activities such as tree nurseries, fodder production, crop production, livestock watering points, etc. The project will divert floodwaters from streams and spread them onto adjacent land that will be used as either a farm, grazing reserve, agro-forestry plot or tree nursery. This entails the construction of a simple check dam across seasonal streams to block runoff and force its water to spread to neighbouring farms. Stones collected from nearby hills will be dumped on the riverbed mixed with material to fill spaces between stones and thus obstruct the runoff. The implementation will be carried out by an NGO and local communities. The NGO and the community will develop criteria for targeting participants and will develop a plan of action and timelines for implementation. Each water-diversion structure is expected to benefit 300 households.

#### Reforestation (all zones)

228. Reforestation activities in appropriate areas, particularly around the newly constructed infrastructure and in severely degraded areas will also restore important ecosystem services and enhance the resilience of communities. The LDCF will support the planting of seedlings throughout the target watershed, and along river channels. The community capacity building carried out under the various outputs of the LDCF1 will help make this initiative sustainable through awareness raising and improved knowledge on natural resource management. LDCF funds will be used to reforest areas that have experienced the most deforestation. CBOs in the target area will be identified and supported to establish tree nurseries and raise plant saplings on a cost-share basis. Inputs and training will be provided to women and youth to establish business to raise plants. The LDCF1 project will purchase the saplings from the community members and the community will be engaged to plant them in the field on a cash-for-work basis. The CBOs will be tasked to care for the young plants in the field. The CBO may seek the help of forest guards and police to halt the illegal tree felling. The per tree payment rate will be mutually decided by the LDCF1 project team and CBOs. Besides local species and other native or exotic fast-growing, multi-purpose fodder shrubs or trees will also be promoted.

#### *2.4.5 Land Tenure and Water Rights*

229. With regards to the natural resource management activities aforementioned, there are limited foreseen issues with land and water rights. *Xeer* law is the most common framework for land tenure in Somalia.<sup>52</sup> *Xeer* is an unwritten system of laws which is administered through consultations among

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<sup>52</sup> Burman, J., A. Bowden and A. Gole. Land Tenure in Somalia: A Potential Foundation for Security and

elders and focuses on the rights and obligations of one clan to another. This strong role for elders lends legitimacy to local conflict resolution processes, but it is also a sign of the weakness of state institutions such as the courts and police which suffer from a lack of funding, corruption, and clan divisions among staff.

230. With *Xeer* law, clans are responsible for the actions of individual members and are required to pay *diya*, or blood money, in the case of intra-clan crimes. *Xeer* law tends to view rangelands as a collective clan asset. However, clans are expected to allow other clans to graze on the land, particularly in times of need. *Xeer* also contains prohibitions on building enclosures or permanent settlements on pastureland.

231. In the south of the country the Islamic system of *sharia* law is also prevalent. However, compared to *Xeer* law, its impact seems to be relatively limited.<sup>53</sup> For instance, Islamic laws allow for women's inheritance of land. However, in spite of women's attempts to gain land control, farmers only grant rights to men in practice. In pastoral areas, women are largely excluded from clan meetings about resource use and have limited ownership rights in more settled agricultural settings.

232. The legal pluralism provided by clan enforcement in combination with Islamic law has provided a flexible structure that local actors can use for land tenure assignment, and it has also left grey areas within which conflicts begin. The breakdown of central authority also has had adverse effects in rangeland areas. For example, the unregulated installation of new water sources has meant that land which would formerly have been used only seasonally and shared among clans is now sometimes occupied year round by the same group of people. In addition, individuals and groups in some areas have taken to enclosing pieces of rangeland with makeshift fences, upsetting long-held patterns of shared land use.

233. In spite of the multiple entry points for land tenure enforcement, Somaliland has achieved potentially replicable advances in land tenure formalization by issuing individual titles for some cultivated farmland. Somaliland law regarding agricultural land states that farmland should not be carved out of rangeland. In Puntland, where a council of elders dictates the land tenure regime, this system seems to play a large role in resolving disputes over land rights in Puntland by drawing heavily on religious and customary law. In South-Central Somalia where almost exclusively informal practices govern land rights, efforts to strengthen the land tenure regime are beginning.<sup>53</sup>

234. The Land-Use Policies to be developed for each zone in the beginning of the LDCF1 project will build on the existing land tenure reform efforts by enabling Somalia to have greater transparency and certainty in its land tenure regime. The Policies will emphasize Somalia's expansive rangelands where communal ownership predominates and where strengthening traditional land management practices and harmonizing their interaction with formal systems is the best strategy for boosting productivity and preventing conflict and overuse.<sup>53</sup> In addition, the Land-Use Policies will ensure reform of the current system which largely excludes women from having control over property. The Policies will empower women to participate in decisions about land and will build the capabilities of local actors to help ensure that interventions achieve sustainable, wide-spread benefits (e.g., not just to benefit the rich who are benefiting from oil exploration). As per the recommendation of the study on Land Tenure in Somalia (Shuraako, Feb 2014), the Land-Use Policies will support a mediated-state model to act as the over-arching law for land tenure at a macro-level while serving as a mediator between various customary and religious sources of legal authority.

235. Similar to land, the right to use surface water (either for domestic use or irrigation) is dependent on traditional *Xeer* law. Usage rights depend only on the ownership or the right to access land along the river (or other surface water body) from where the water is extracted. Similarly, the right to access underground water is associated with the rights over the land on which the groundwater source has been established. Traditional Somali law (*Xeer*) says that water is public

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Prosperity. Shuraako Publication Feb. 2014.

<sup>53</sup> Burman, J., A. Bowden and A. Gole. Land Tenure in Somalia: A Potential Foundation for Security and Prosperity. Shuraako Publication Feb. 2014.



property; appropriation and usage is acquired by administrative permits. At present, these customary practices are still commonly applied in rural Somalia. To regulate the use of water resources, international support was given to both Somaliland and Puntland to draft and enter into force Water Acts for their respective territories in 2004. These drew on both established and traditional laws and customs. Consequently, access to water in Somalia is inevitably connected to land rights and tenure.<sup>54</sup>

This information aforementioned on water rights and land tenure is fully considered under Component 2 when mobilizing water and undertaking agricultural, pastoral and reforestation development activities. As described above, communal rights have become stronger due to lack of governance. Land right issues could possibly be an issue in the South where new titles for deeds may be required. To mitigate land and water rights issues, communities will be consulted prior to and during activity implementation. Traditional decision-making structures will be relied on heavily for land and water issues. This will reduce the risk of disputes and conflicts over land and water. Also, UNDP Drylands will support project implementation due to their experience in addressing land rights for men and women throughout Somalia. Furthermore, to mitigate potential conflicts over natural resource appropriations, an NGO will be engaged to conduct a water / land rights study for the eight districts to ensure that there will not be conflicts. All recommendations mitigating land and water rights issues will be published by the Environmental Impact Assessments to be financed with LDCF funds during the first quarter of the project.

#### Building the Resilience of Women's Livelihoods (All zones)

236. Similar to increasing the representation and capacity of women in climate change adaptation decision-making at the national level under Component 1, Component 2 will support women's power and presence in community-based decision-making. Small grants will be provided for implementation of small-scale, community-based EbA and NRM measures based on priorities identified by women. Also, women representation will be required in the District Disaster Management Committees (DDMCs). The Disaster Risk Management plans to be developed by the DDMCs will be gender-sensitive.

237. Component 2 will focus on supporting women's' groups from each of the eight districts to build resilient livelihoods. Women's' groups will be selected from each zone for training to lead the piloting of innovative businesses aimed at adopting climate adaptation technologies (e.g., drip irrigation systems, and solar water pumps). In Somalia, women are more often than men, involved in operating small businesses due to variety of historical and cultural reasons. Women work on farms, and they may be best placed to operate equipment, such as solar pumps for shallow wells, which can be used to improve crop and vegetable production. Women can also be involved in the sale of water, as is the current practice, through private berkads. An expert will be hired to carry out a study that looks at the various options for climate adaptation technologies that can be set-up as sustainable businesses in the target districts. Key technologies will be prioritized based on the study and consultations with stakeholders. An NGO will be hired for implementation. The NGO will select 30 Women's Organizations that will select members who want to jointly start an enterprise. The NGO will be guided by the Ministry of Women and Human Rights Development to effectively enhance the livelihoods and incomes of vulnerable women. The women will be provided with trainings on value-chain analysis and marketing, initial capital and assistance with setting up the business.

A summary of the Outcomes, Outputs and the financial resources per Output is provided in Table 4.

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<sup>54</sup> FGS: Preparing Somalia's Future: Goals for 2015. Second Istanbul Conference, Turkey, Background Paper on Water, May 2012.

Table 4: Indicative Activities per Output for Component 1

<b>Component 2 Models of community and ecosystem resilience developed and implemented in pilot areas selected in consultation with government and community stakeholders (USD 5.61m)</b>
<b>Output 2.1 :</b> Ecosystem-based Adaptation (EbA) plans, Natural Resource Management (NRM) strategies and Integrated Water Management options for critical watersheds, rangelands, agricultural lands and forested areas are developed and piloted jointly by local governments and vulnerable communities at each location
<b>2.1.1:</b> Development of Arid and Semi-Arid (ASAL) Zone Adaptation Plans for Somaliland and Puntland and a Shabelle Basin Adaptation Plan for South Central based on 1) results from technical studies, 2) government and community consultations for adaptation planning and 3) climate vulnerability analysis (exposure, sensitivity and adaptive capacity) and an inventory of ecosystem functions. Technical studies will be carried out to lead to the district level adaptation plans. An International Climate Adaptation Expert (preferably of Somali origin) will support the development of these plans.
<b>2.1.2:</b> Research and documentation on the most relevant international best practices on the cultivation and uses of drought-resilient seeds and plants for food, fodder and forestry carried out to support EbA and NRM plan implementation in partnership with relevant line ministries working in collaboration with FAO, etc. and regional organizations such as the International Livestock Research Institute (ILRI), the Consultative Group on International Agricultural Research (CGIAR), the International Wheat and Maize Improvement Centre, the International Institute of Tropical Agriculture and the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT).
<b>2.1.3:</b> Community mobilization and a 6 month training on Natural Resource Management (NRM), Integrated Water Management (IWM) and basic project management and budget monitoring through the establishment or revival of 9 Community Based Organizations (CBOs) (5 in South Central, 2 in Puntland and 2 in Somaliland) where LDCF1 projects are being implemented.
<b>2.1.4</b> Mass awareness campaign with distinct strategies for local communities/NGOs/CSOs and women to disseminate information on existing policies and regulations that address principles of integrated land and water management, climate change and gender-sensitive, Ecosystem-based Adaptation.
<b>2.1.5</b> Establishment of 16 Agro-Pastoral Field Schools, 2 APFS per District.
<b>2.1.6</b> Training of 1 Master Trainer from NGOs, CBOs or government departments per zone for 4 months, possibly in a neighbouring country and training for 1 facilitator per APFS for 1 month (cover stipend costs). If FAO trainers are available, they will be recruited to train the LDCF facilitators (through an inter-agency agreement with UNDP).
<b>2.1.7</b> Meeting once every week for 3 months every year for each APFS.
<b>2.1.8</b> Distribution of agricultural inputs to participants of APFS.
<b>2.1.9</b> Provision of small grants to implement small-scale, community-based EbA and NRM measures, especially those identified by women as priorities, which may include soil and water conservation methods, soil bunds, rehabilitation of berkads, etc. that will enable sustainable farming and pastoral practices.
<b>Output 2.2 :</b> District Climate and Disaster Management Committees are established and Disaster Risk Reduction plans are generated to address community vulnerabilities to climatic change and to facilitate response and preparedness plans to reduce identified risks
<b>2.2.1:</b> Establishment of volunteer community-based District Disaster Management (DDMC) Committees in Burao, Hargeisa Districts (Somaliland), Dangoroyo and Bandar Bayla Districts (Puntland) and Balanbale, Guriel, Jowhard and Afgooye districts (South Central) by a designated NGO who will ensure appropriate gender representation in each DDMC. Establishment includes training of DDMCs in disaster risk reduction and climate adaptation.
<b>2.2.2</b> Development of community-based, gender-sensitive DRM Plans to address identified Climate Change (CC) and natural risks with CC projections and scenarios.
<b>2.2.3:</b> Supporting DDMCs in developing training materials on DRM and early warnings for CBOs in addition to implementing the training for all CBOs in their districts.
<b>2.2.4:</b> Supporting the DDMCs/CBOs in establishing a resilience fund with proper transparency and accountability mechanisms to be used to finance operation and maintenance costs for community-based infrastructure and disaster preparedness measures (to be co-financed by contributions and district budgets).
<b>Output 2.3 :</b> Suite of physical techniques and adaptation measures including investment in medium and large-scale water infrastructure, reforestation, flood-control

infrastructure, and watershed management developed to improve ecosystem resilience of critical watersheds, rangelands and forested areas through government support
<b>2.3.1:</b> Feasibility studies, design documents and EIAs prepared for the planned infrastructure and target watershed/drainage basins including topographical, hydrological, hydrogeological, geotechnical and surface water balance studies to support adaptation technology design and siting of infrastructure.
<b>2.3.2:</b> Training on Operation and Maintenance for all zones for the three line ministries, Agriculture, Livestock and Water.
<b>Somaliland</b>
<b>2.3.3:</b> Rehabilitation of 2 grazing reserves: Qoriyaale grazing reserve (150 km <sup>2</sup> ) in Hargeisa District and Dulcad grazing reserve (800 km <sup>2</sup> ) in Burao District. Activities include fencing, hiring of rangeland guards, community mobilization and replanting of grasses.
<b>2.3.4:</b> Construction of 2 earthen dams along with distribution infrastructure (i.e., pumps, pipes, channels, etc.): 50,000 m <sup>3</sup> dam at Baligubadle in Hargeisa District and 50,000 m <sup>3</sup> dam at Heere village in Burao District. The design will be based on detailed technical studies, Environmental Impact Assessments and consideration of future climate projections.
<b>2.3.5:</b> Flood control project at Geed Deble in Hargeisa District (500 m of flood control gabions at Hargeisa water sources in Geeddeble) The design will be based on detailed technical studies, Environmental Impact Assessments and consideration of future climate projections.
<b>2.3.6:</b> Construction of 5 water diversion structures to control soil erosion and enhance livelihoods at 5 sites in the villages of Duruqsi, Balidhiig, Warabaye, Dhoqoshay and Warcibran in the Hawd plateau of Togdheer region. Water diversions will support activities such as tree nurseries, fodder production, crop production, livestock watering points, etc.
<b>2.3.7:</b> Reforestation activities along 200 ha in appropriate areas within the Hawd plateau, particularly around the newly constructed water infrastructure and in severely degraded areas.
<b>Puntland</b>
<b>2.3.8:</b> Construction of 2 dams along with distribution infrastructure (i.e. pipes, channels, etc.): 50,000 m <sup>3</sup> dam at Labagarday (Biyo Guuduud) in Bandar Bayla District and 50,000 m <sup>3</sup> dam at Libaho in Dangoroy District. The design will be based on detailed technical studies, community consultations, Environmental Impact Assessments and consideration of future climate projections.
<b>2.3.9:</b> Construction of 6 water diversion structures to control soil and gully erosion and enhance livelihoods at 3 sites in Bandar Bayla (Dunyo, Bohol, Dhuur) and 3 sites in Dangoroyo (Jidhan, Dangaryo, Elbuh). Designs will be finalized after detailed studies.
<b>2.3.10:</b> Financial support and training for establishing tree nurseries, fodder production, farms and livestock watering points near the 6 sites.
<b>2.3.11:</b> Reforestation activities along 200 ha, led by government authorities, in appropriate areas within the target drainage basin, particularly around the newly constructed water infrastructure and in severely degraded areas.
<b>South Central</b>
<b>2.3.12:</b> Rehabilitation of 4 canals to be rehabilitated, 2 in Afgoye and 2 in Jowhar. Estimated size various from 0.5km to 4km.
<b>2.3.13:</b> Rehabilitation / Construction of dams in all 4 target districts.
<b>2.3.14:</b> Rehabilitation of 2 boreholes in Balanbale and 2 in Guriel.
<b>2.3.15:</b> Construction of 8 new water diversion/flood routing structures, 2 in each district.
<b>2.3.16:</b> Financial support and training for establishing tree nurseries, fodder production, farms and livestock watering points near the water sites.
<b>2.3.17:</b> Reforestation activities along 200 ha, led by government authorities, in appropriate areas within the target drainage basin, particularly around the newly constructed

water infrastructure and in severely degraded areas.

**Output 2.4 :** Women's livelihood diversification is strengthened with the introduction of adaptation technologies aimed to reduce dependence on dwindling natural resources

**2.4.1:** Study on the feasibility, comparative costs and benefits and business potential of a range of small-scale adaptation technologies including fuel-efficient cookstoves, rainwater harvesting tanks, solar pumps, drip irrigation systems etc. The study will include a sex disaggregated, baseline analysis of the women business group's current incomes by an NGO.

**2.4.2** Selection and design of a project focused on one of the identified adaptation technologies, including a value-chain analyses.

**2.4.3** Training of 10 women groups in each zone in setting up small businesses, business plans and in the technical aspects of the selected adaptation technology option.

**2.4.4** Provision of micro-grants on a cost-share basis to support 10 women entrepreneur groups/cooperatives per zone to start up their adaptation technology business. The women's cooperatives will match 20-25% of the grant funding to ensure ownership and sustainability of the businesses.

A summary of the Outcomes, Outputs and the financial resources per Output is provided in Table 5 below.

Table 5: Summary of Outcomes and Outputs

OUTCOMES	OUTPUTS	COSTS (USD)
1. Policies, plans and tools reviewed, revised, developed, adopted and implemented by government to mainstream and enhance adaptive capacity and mitigate the risks of climate change on vulnerable communities and critical ecosystem services	1.1 National and sub-national institutional knowledge on integrated land and water management principles under conditions of climate change and on ecosystem based approaches to climate adaptation is increased	649,000
	1.2 Sectoral analyses of climate risks, vulnerability and gender dimensions of climate change are completed by Government Departments to facilitate mobilization of long-term financing for Climate Change Adaptation	150,000
	1.3 Policies, regulations and frameworks for the protection, conservation and management of land and water ecosystems under conditions of climate change are developed, reviewed and revised	614,500
	1.4 National and regional Disaster Risk Management institutional capacities are reinforced to produce early warning products and to disseminate early warnings	606,500
2. Models of community and ecosystem resilience developed and implemented in pilot areas selected in consultation with government and community stakeholders.	2.1 Ecosystem-based Adaptation (EbA) plans, Natural Resource Management (NRM) strategies and Integrated Water Management options for critical watersheds, rangelands, agricultural lands and forested areas are developed and piloted jointly by local governments and vulnerable communities at each location	1,509,000
	2.2 District Climate and Disaster Management Committees are established and Disaster Risk Reduction plans are generated to address community vulnerabilities to climatic change and to facilitate response and preparedness plans to reduce identified risks	184,000
	2.3 Suite of physical techniques and adaptation measures including investment in medium and large-scale water infrastructure, reforestation, flood-control infrastructure, and watershed management developed to improve ecosystem resilience of critical watersheds, rangelands and forested areas through government support	3,687,000
	2.4 Women's livelihood diversification is strengthened with the introduction of adaptation technologies aimed to reduce	230,000

	dependence on dwindling natural resources	
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## 2.5 Key indicators, risks and assumptions

238. Key indicators, risks and assumptions are indicated in the Project Results Framework and Risk Log in Annex 1. Indicators have been developed to be Specific, Measurable, Achievable, Realistic and Timebound ('SMART') and are indicated in the Project Results Framework. Risks and recommended counter-measures were identified during bilateral consultations during the project preparation phase.

Key risks and assumptions underlying project development include the following:

Table 6: Key risks and assumptions

Risk	Rating	Risk Mitigation Measure
<p>A <b>low level of cooperation</b> between executing institutions due to political divisions and the existence of distinct zones of Federal Somalia, Puntland and Somaliland makes the coordination of policy development challenging.</p>	<p>Medium</p>	<p>Management arrangements include one clear focal point for implementation, the Ministry of Environment and Petroleum which also houses the GEF operational focal point. Each zone will have a Project Officer who will be in charge of activity implementation on a day to day basis. Programme outcomes will be maximized by having three clear Regional Committees (led by the zonal Project Officer) which will include relevant government representatives, district officers and NGO/CBO representatives for each zone. The Regional Committees will be responsible for implementing the zone's adaptation priorities.</p> <p>To unify climate change responses and facilitate fund mobilization for adaptation for Somalia, one federal Climate Change policy will be generated. In contrast, since land-use varies from one zone to the next based on the different climate zones present in Somalia and the different prevailing livelihoods, each zone will develop its own land use policy. This will avoid any inter-zone conflict and will target the adaptation needs in each zone. Similarly, Climate Monitoring / Early Warning System centres will be developed in each zone due to the varying capacities for disaster preparedness in each zone (DRM capacities are strongest in Somaliland and weakest in South Central).</p> <p>As evidenced by the New Deal Compact, the recent efforts of the international community to build consensus among the zones and reunify Somalia are positive. It is expected that positive progress will be made in this direction and political environment will become conducive for implementing the LDCF financed project. UNDP Somalia furthermore has excellent relationships with all the key partners and will play an active role in facilitating coordination.</p>
<p><b>Security risks</b> could affect project implementation, particularly clan-based conflicts over competing uses of natural resources.</p>	<p>Medium</p>	<p>The target areas within the eight districts have been chosen based on the criteria of having a stable security situation. To ensure security, the project will work through local NGOs/CBOs, who have experience in project implementation, for project delivery. The security situation in the selected districts will be monitored closely and if necessary, project activities will be shifted to more</p>



Risk	Rating	Risk Mitigation Measure
		<p>secure areas or districts.</p> <p>Similar to the NAPA and LDCF preparation, project implementation will ensure that customary dispute resolution mechanisms are used to resolve any conflicts. For instance, traditional elders, religious leaders and clan leaders will continue to be consulted on any major implementation decisions for ground-based activities. Project implementation will also ensure an inclusive, participatory approach involving all key stakeholders including women and youth and an equitable distribution of benefits.</p> <p>The recognition of the new federal government by the EU and USA and supportive resolution of the UN Security Council to strengthen the national institutions is already having positive impacts for peace building in Somalia. LDCF funds will further support security by empowering the youth. Funds will be used to provide technical knowledge on climate change adaptation to current and prospective students (e.g., incorporating climate modules into existing degree programmes and offering scholarships for university degrees with climate modules). Also the security situation will be improved by creating clear, publicized land used policies and by improving the ecosystem services which support agriculture and pastoral livelihoods (e.g., through water mobilization and reforestation).</p>
<p><b>Limited climate monitoring</b> inhibits forecasting capabilities and the ability to develop detailed spatial mapping to allow for adequate adaptation and risk reduction planning.</p>	<p>Low</p>	<p>Since national forecasting capacities are absent in Somalia, regional forecasting products generated by FEWSNET, ICPAC and FAO SWALIM will be exploited by the Climate Monitoring /Early Warning System (CM/EWS) centres / focal points to be developed / supported in the proposed project. (The regional forecasts make use of the limited monitoring network in Somalia as well as data from neighbouring countries in the region and/or satellite images.) Such forecasts will be appropriate for the climate risk management approaches to be employed with LDCF funds that will not be highly dependent upon precise climate change scenarios. Rather, LDCF funds will focus on building the capacities of the CM/EWS centres in Somaliland and Puntland and the CM/EWS focal points in South Central to use the existing products for disaster risk reduction planning in the context of uncertainty. Funds will also support ministries and districts to generate development plans and adaptation decisions in the face of uncertainty. In such a manner, the proposed project will focus on building the capacities of the ministries/institutions to deliver adaptation and risk reduction planning with existing data. This is seen to be more critical than expanding the monitoring network when the CM/EWS and relevant ministries will not yet have the required human resources and technical expertise to maintain additional stations. Similarly, for early warning development, the project will support enhanced communication of existing forecasts and the development of district level Disaster Management Committees (DDMCs) so as to focus on the delivery of risk information to the communities.</p>

Risk	Rating	Risk Mitigation Measure
<p>The project could encounter delays due to the <b>lack of nationally-available expertise and human resources</b> and sustainability may be at risk if trained individuals leave government ministries/institutions for more lucrative private, international or non-governmental positions.</p>	Medium	<p>Universities will be supported to introduce climate modules into existing degree programmes so that students can be trained in the most up-to-date relevant climate change adaptation practices relative to their respective discipline (e.g., water and soil conservation methods for agricultural studies, optimal water mobilization infrastructure for civil engineering studies, etc). Students will be incentivized to follow fields where there is a climate change emphasis because LDCF funds will be used to offer scholarships in each relevant discipline. This approach will generate technically-savvy graduates who will then provide the required technical expertise to the understaffed ministries.</p> <p>The issue of the unavailability of requisite human resources will also be mitigated by recruitment of international experts (with preference given to those of Somali origin) who will work closely with in-country counterparts and will provide targeted capacity building activities (e.g., sustainable forestry, agronomy, water mobilization) in Component 1.</p> <p>Furthermore, an international fund mobilization expert will be engaged to ensure that the ministries have the necessary budget lines to keep the staff base or to enhance the technical expertise required if there are weaknesses in particular areas.</p>
<p>Water and natural resource management strategies are made ineffective by an unanticipated <b>increase in the frequency of flood events and continued drought</b> which jeopardizes agricultural and pastoral production</p>	Medium	<p>The project will take into account region-specific current climatic variability in the selection of the adaptation technologies. For instance earth dams will be placed in regions where significant water must be mobilized. Water diversions will be placed in areas to mitigate flood risks for downstream farmers/pastoralists. Water storage will be provided in the event that additional drought events occur. Project beneficiaries will also gain training in resiliency-building approaches such as soil and water conservation methods. The choice of adaptation technologies to be implemented will be contextualized based on the targeted needs (e.g., women, youth) so that all members of the rural populations can build resilience to climate shocks. Furthermore, the project will support women to have sustainable businesses in promoting adaptation technologies so as to diversify their livelihoods and provide them access to capital.</p>
<p>Targeted farmers and pastoralists are <b>sceptical and unwilling to use adaptation technologies / practices</b> so as to diversify their livelihoods and/or income diversification strategies do not significantly increase household incomes.</p>	Low	<p>In Component 2, LDCF funds will be used to provide field demonstration sites in the form of the Farmer and Pastoral Field Schools. These sites will provide extensive training on the appropriate adaptation technologies for the target areas. LDCF funds will then be used to provide small grants to the farmers and pastoralists so that they can use the adaptation technologies in their respective farms/grazing lands to improve their productivity.</p> <p>Funds will also be used to support women to promote adaptation technologies. The idea is to promote women-based groups to have sustainable businesses focused on the sale of adaptation technologies. Such an approach will build on the entrepreneurial spirit of Somali women, use existing women-</p>



Risk	Rating	Risk Mitigation Measure
		based groups and provide women with alternate livelihoods and sources of income.
<b>Water ministries have limited capacity to design, construct and perform maintenance</b> on water mobilization infrastructure	Low	With large physical infrastructure planned in Component 2, a Chief Technical Advisor (CTA) and water mobilization expert will be recruited to assist the Ministries of Water with proper design and construction of water mobilization infrastructure in each zone. The CTA and expert will be tasked in training the Water ministries on proper Operation and Maintenance (O&M). The CTA will provide O&M assistance throughout the entire project.
There is <b>insufficient technical and operational capacity</b> within the regional governments to coordinate drought and flood preparedness and to implement unfamiliar Ecosystem-based Adaptation actions	Medium	In Component 1, LDCF funds will be used to provide significant training for the ministries on climate change adaptation. A Climate Change expert will be seconded to each zone's Environment Ministry for the entire duration of the project. The expert will be tasked with familiarizing the ministries on Ecosystem-based Adaptation actions and how they contribute to supporting the livelihoods of pastoralists and farmers. Similarly, a Disaster Risk Management expert will be recruited to support the CM / EWS centres to be developed in the proposed project. The DRM expert will be tasked with reinforcing the drought and flood preparedness of the CM/EWS centres. The centres will be responsible for building the capacity of the District Disaster Management Committees (DDMCs) to be formed in the proposed project. The DDMCs will be trained to develop targeted disaster preparedness plans based on their district's vulnerabilities.
The <b>lack of politically recognized Environmental Impact Assessment procedures</b> causes unforeseen adverse social/environmental impacts	Low	During project preparation, an Environmental and Social Screening Procedure was used to identify any potential social/environmental risks and their required mitigation measures. The mitigation measures have been integrated into the project design. As only Somaliland has a formalized EIA procedure which is not as rigorous as international approaches, an international EIA team (preferably with experts of Somali origin) will be recruited to conduct an internationally-recognized EIA assessment procedure during the first 6 months of the project. With such an approach, particularly with the physical infrastructure to be built in the all zones, this will avoid any hazards such as potential downstream impacts.

## 2.6 Cost-effectiveness

239. With recently established ministries in all zones of Somalia, capacity building needs are great. By surveying the technical support needs for each zone during the project preparation phase, a set of common specialized technical staff was identified, each with particular skills related to the development of climate change awareness and land-use policies, the effective design and implementation of water mobilization infrastructure and reforestation as well as disaster risk management expertise. Technical experts to be recruited will be expected to build the capacity of the relevant institutions in all zones. With this approach, all zones will benefit from the diverse technical support that will be provided. Further benefits include time saved on HR procurement procedures (e.g. for hiring, advertising etc.) and the ability to compare and standardize support across zones where

possible. An example of consolidated training will be group workshops for relevant ministries on how to effectively plan, manage and monitor adaptation projects.

240. Another key design element was to consolidate knowledge-sharing activities and mass awareness campaigns to promote the sharing of information and learning and to encourage discussions of best practices i.e. what works, reasons for failure etc. An example will be to send representatives from all zones on a study tour to another African country where they have successfully implemented a National Climate Change policy. The study tour will promote coherent capacity building so that the zones will work in coordination, be involved in policy development and abide by over-arching, centralized policies. Similarly, the National Climate Change Policy will synergize the current patchwork of ad-hoc policies related to the environment across all zones which are in need of being coordinated. Although LDCF funds will be used to address adaptation in the NCC policy, the policy will be able to easily integrate measures to address mitigation in the future.

241. In contrast, according to Stakeholder consultations, separate land use policies were seen to be required per zone due to different land types, climate characteristics and livelihood practices. By taking a zonal approach to land use, each region will be able to more effectively address specific conflicts over natural resources, taking into account local land tenure and water rights. Similarly, separate Climate Monitoring and EWS centres will be developed in Puntland and Somaliland due to the fact that it is not practical to have a centralized centre to coordinate alert dissemination; each zone is secular in terms of communication protocols and it is most cost-effective to use existing alert protocols such as radio, TV emissions.

242. Due to the fact that Somalia has no forecasting capability, LDCF funds will take the first steps in building Climate Monitoring / Early Warning Centres in Somaliland and Puntland (where DRM capacities exist). As an initial step towards building national Early Warning capacity, they will be responsible for disseminating ready-made forecast products (e.g., from FEWSNET, ICPAC, etc) to the communities. In the same way, LDCF funds will steer away from supporting the complex process of equipment procurement and associated training. Instead, the ministries will focus on initially having the technical expertise to be able to maintain and operate any equipment to be procured in the future.

243. Along these lines, university curricula will be updated so that climate change is mainstreamed in existing programmes. Students in each zone will be supported with LDCF funding to attend these updated programmes. The technical graduates will then effectively serve as a pool of qualified, skilled personnel to serve the understaffed ministries. As 73% of the population is under 30 years of age in Somalia and the unemployment rate is approximately 67% (61% among men and 74% among women), this approach will build the technical capacities of the youth so that they can be employed.

244. As stated in Section 2.3, the LDCF1 financed project will build on the existing initiatives and exploit successful approaches such as the Cash for Work scheme commonly used in the PREP programme. In terms of water mobilization and farmer field school strategies, an assessment of other ongoing project activities (EU, FAO) has been undertaken, noting the project site and the success or failure of existing strategies (e.g. water diversions, soil and water conservation techniques etc). Furthermore, as indicated in Table 7, the LDCF1 has evaluated various options for water mobilization. The choice of activities is based on the cost, the existence of expertise already housed within the Ministries and environment limitations (e.g., high evaporation rates). Furthermore, by conducting an initial technical hydro-geological study and engaging a water mobilization expert, proper designs for water mobilization and diversion infrastructure are more likely to be ensured so that financial and human resources will not be wasted. Finally, project costs include funding a Chief Technical Advisor to ensure that design and construction is conducted appropriately throughout the project.

245. LDCF funds will also support training by Agro-Pastoral Field Schools so that practical skills can be transferred into sustainable farming and pastoral applications. Agro-pastoralists require on-the-farm/pasture training using continual mentorship during critical seasons so that sustainable agro-pastoral capacities can be developed over time. Also, lessons-learned from significant initiatives in agro-pastoralism, pastoralism and reforestation must be continually integrated. As a result, the project

uses a staggered approach to training over the duration of the project and will provide intensive training sessions for when agro-pastoralists require the most guidance.

246. It was also deemed most cost-effective to support CBOs/NGOs to implement ground-based adaptation measures. Local CBOs/NGOs have demonstrated their ability to train, mobilize and build awareness within their communities and have also taken lead roles in disasters in the past. As noted during stakeholder consultations, the community has considerable confidence in NGOs/CBOs. With more capacity reinforcement, NGOs/CBOs will be the best-placed to assist with the implementation of LDCF activities.

247. Due to project budget limitations, it was necessary to select from the long-list of needs to support agro-pastoral development and livelihood diversification and identify those within the scope and cost-effectiveness of the project. As other projects are addressing land-use management and developing sustainable agro-pastoral and pastoralist practices throughout Somalia, the LDCF1 financed project will build on these projects (as indicated in the discussions in Sections 2.3). The chosen set of activities was reviewed in a Validation Workshop in July 2014 involving all stakeholders. Based on group consensus, Outputs/Activities were revised accordingly. The Outputs outlined have been chosen based on their financial feasibility. They have been chosen over alternative ways to address project barriers, as shown in Table 6 below. A summary of the co-financing strategy, indicating sources, purposes and amounts which will be used to support activity implementation is described in Table 2.

Table 7: Demonstration of cost-effectiveness for each proposed Output indicating the project barrier addressed by each Output

OUTPUTS	Barrier Addressed	Alternatives Considered
<p>1.1 Increased knowledge of national and sub-national institutions in integrated land and water management principles under conditions of climate change and in the ecosystem based approaches to climate adaptation</p>	<p>Limited technical and operational capacities to support adaptation on national and local levels</p> <p>Limited knowledge and capacity to respond to climate change on national and local levels</p>	<p><b>Alternative 1:</b> Provide no support to ministries on effective project management: LDCF funds will be used to reinforce the capacities on the technical aspects of adaptation measures. However, if the ministries have no capacity to manage and monitor CCA programmes, they will not be able to sustain and upscale the programmes. Consequently, if the ministries cannot manage projects properly, they will receive less support for future interventions.</p> <p><b>Alternative 2:</b> Rely on existing academic programmes: Research institutions do not have any climate-focused modules. Consequently, there are no new graduates with relevant technical capacities to support the under-staffed ministries (Agriculture, Environment, Water) with climate related projects.</p>
<p>1.2 Government Departments complete sectoral analyses of climate risks and vulnerability to facilitate mobilization of long-term financing for Climate Change Adaptation</p>	<p>Limited knowledge and capacity to respond to climate change on national and local levels</p> <p>Limited technical and operational capacities to support adaptation on national and local levels</p>	<p><b>Alternative 1:</b> One ministry conducts a climate vulnerability assessment: However, climate change impacts are felt cross-sectorally (across Agriculture, Livestock, Water, Health, Planning etc) and each has specific interests. By promoting ownership to address Climate Change, ministries will gain incentive to find the best proactive measures to address vulnerabilities. They will also coordinate with existing early warning centres (IGAD ICPAC and FAO SWALIM) to provide the most accurate, targeted weather and climate information for the rural populations.</p> <p><b>Alternative 2:</b> Do nothing. However, there are no existing funds which consider the long-term and which use a transparent, diversified portfolio of financing strategies. Rather, Somalia is at high risk of ad hoc donor initiatives and short-term Government allocation of funds for unsustainable activities can contribute to mal-adaptation (e.g. Charcoal Production).</p>
<p>1.3 Government officials review, revise or draft new policies, regulations and frameworks for the protection, conservation and management of land and water ecosystems under conditions of climate change</p>	<p>Political disintegration/Lack of coordination</p> <p>Absence of and lack of coordination and decentralization among natural resource</p>	<p><b>Alternative 1:</b> Relying on other national policies / strategies to handle climate change: however, with this option, there would be no central mechanism to coordinate climate-related activities and to standardise disaster prevention strategies. Developing a National CC Policy was deemed the best mechanism for streamlining the coordination of CCA/DRM related programmes/projects, as shown in other African countries such as Zambia.<sup>55</sup> LDCF funds will enhance the capacity of the government to mobilize funds for climate change. Financing for mitigation will be mobilized in the future by the Office of the Prime Minister. Furthermore, having separate climate policies for each zone would be</p>

<sup>55</sup> Government of the Republic of Zambia, Ministry of Tourism, the Environment and Natural Resources, *National Climate Change Response Strategy*, December 2010.

OUTPUTS	Barrier Addressed	Alternatives Considered
	policies	<p>redundant and would only exacerbate the current patchwork of sectoral policies. In order to ensure zonal policies do not conflict with each other (e.g. water and energy, or water and agriculture), a central, prominent national CC policy will have the capacity to identify and resolve the transversal CC issues across Somalia.</p> <p><b>Alternative 2:</b> No Land Use policies: By defining proper land-use plans this will prohibit the current practice of encroaching on grazing lands and cutting forests for charcoal. Stakeholder consultations indicated that land use issues are the underlying cause of the community's vulnerability to climate change. If land use policies are not developed and enforced, conflict over natural resources will continue.</p> <p><b>Alternative 3:</b> Do not have a database and information management system for land-use: however, this would prevent a way to measure to monitor the planned and existing interventions on improving land use sustainability (EU MDG project, UNDP PROSCAL programme). A database enables the easy use of data across agencies as well as the ability to share data regionally and internationally with relevant agencies/organizations (e.g. IGAD) so that lessons learned can be documented about how to reduce natural resource conflict on the basis of sound land tenure decisions.</p>
1.4 National and regional Disaster Risk Management institutions are reinforced to produce early warning products and to disseminate early warnings	<p>Limited climate monitoring and weak disaster risk preparedness capacities</p> <p>Limited technical and operational capacities to support adaptation on national and local levels</p>	<p><b>Alternative 1:</b> No platform to formalize and centralize Climate Monitoring and EWS: this is currently the case in all other EWS and CC-related projects (e.g., SWALIM) which has led to lack of coordination and data sharing among ministries.</p> <p><b>Alternative 2:</b> Enable each information dissemination agency (including donors) to disseminate alerts directly: With this option, there is no central focal point for all NGOs/CBOs to report to for high level questions and to clarify disaster prevention strategies.</p> <p><b>Alternative 3:</b> One-time training for technical staff to save financial resources. However, training needs to be provided each year as more personnel are absorbed. Thanks to mainstreaming CC into university programmes, new staff will continually require capacity building in DRR and Early Warning dissemination.</p> <p><b>Alternative 4:</b> Procure additional monitoring infrastructure to improve EWS/CI, however, there is no meteorological service in any of the zones. LDCF funds will be used to build capacities rather than delivery of hardware. This is because more monitoring hardware will not be able to be maintained and operated and it will not improve the lack of warnings produced.</p> <p><b>Alternative 5:</b> Have one Climate Monitoring and EWS Centre: However, due to the political situation, it would not be possible to have a centralized centre which could coordinate alert dissemination. Each zone is secular in terms of communication</p>

OUTPUTS	Barrier Addressed	Alternatives Considered
		<p>protocols. Existing protocols (radio, TV emissions) will be exploited and built upon.</p> <p><b>Alternative 6:</b> Develop downscaled forecasts: However, there is no meteorological service in Somalia. As such, no one within the government has the capacity to work with complex forecasting algorithms. In order to produce bulletins, LDCF funds will be used to gradually build the capacity of the Climate Monitoring and EWS centres to be established in Puntland and Somaliland and the Climate Monitoring and EWS focal points within the ministries in South Central. Outside open-source forecasting products, such as NOAA’s CFS forecasting tool will be used until the Climate Monitoring and EWS centres gain sufficient capacity in the years to come. Additionally, regional and international databases (e.g., NOAA’s CFS tools) and regional products from FEWSNET and by IGAD will be exploited.</p>
<p>2.1 Ecosystem-based Adaptation (EbA) plans, Natural Resource Management (NRM) strategies and Integrated Water Management options for critical watersheds, rangelands, agricultural lands and forested areas are developed and piloted jointly by local governments and vulnerable communities at each location</p>	<p>Limited capacities on how to adapt to climate change</p> <p>Unsustainable water and natural resource management practices</p>	<p><b>Alternative 1:</b> Rely on pastoralism rather than develop agro-pastoralism; however, pastoral systems alone would not allow many of the community members, to diversify their livelihoods through improved farming practices. For instance, cultivating diversified fruits/plants provides alternative Income Generating Activities and the means to spread revenues across seasons, providing greater resilience to climate shocks.</p> <p><b>Alternative 2:</b> One-time training to save financial resources: however, farming inexperience and lack of continual mentorship will not enable the initiatives to succeed in the long-run. Agro-pastoralists require on-the-farm/pasture training by facilitators during critical seasons each year so that sustainable agro-pastoral capacities can be developed over time. Also, lessons-learned from significant initiatives in agro-pastoralism, pastoralism and reforestation must be continually integrated.</p> <p><b>Alternative 3:</b> Provide training to Agro-Pastoral Field Schools without grants: The training by the field schools is only a means to the end of transferring practical skills into sustainable farming and pastoral applications. Grants will enable the farmers to have the required tools to multiply the benefits of training. They will have access to capital to put sustainable practices in action, such as soil and water conservation methods.</p> <p><b>Alternative 4:</b> Build ministry capacities without coordination with other initiatives (e.g., EU, AfDB) will lead to redundant activities and a waste of financial resources.</p>
<p>2.2 District Disaster Management Committees are established and Disaster Risk Reduction plans are generated to address community vulnerabilities to climatic change and to</p>	<p>Limited climate monitoring and weak disaster risk preparedness capacities</p> <p>Limited knowledge</p>	<p><b>Alternative 1:</b> Limit DRM training to the national level: through the LDCF financed project, the District Disaster Management Committees as well as the community members will gain expertise in preparing for potential droughts and floods and can more easily transfer best practices to communities.</p> <p><b>Alternative 2:</b> Do nothing: if the districts are not informed on drought/flood preparedness, they will not be able to convey to communities when to prepare for floods</p>



OUTPUTS	Barrier Addressed	Alternatives Considered
facilitate response and preparedness plans to reduce identified risks	and capacity to respond to climate change on national and local levels	<p>and droughts. Through the LDCF financed project, the communities will become empowered to take actions to mitigate floods and cultivate crops in a more drought-resilient manner.</p> <p><b>Alternative 3:</b> Rely on district councils to implement activities rather than community members: however, NGOs and community members have demonstrated their ability to train, mobilize and build awareness within its community. Local NGOs/CBOs have also taken lead roles in disasters in the past. As demonstrated during stakeholder consultations, the community has considerable confidence in NGOs/CBOs. With more capacity reinforcement, NGOs/CBOs will be able to assist with the implementation of LDCF activities as well as scaling-up the project’s activities in adjacent communities after project completion.</p> <p><b>Alternative 4:</b> Focus on CC training for communities rather than DRM: Disasters are tangible and familiar to the Somali communities. Communities are motivated to find means to mitigate the impacts of disasters. Due to the links between DRM and CC, by developing DRM preparedness plans, communities will more effectively build resilience to CC and natural risks.</p>
2.3 Suite of physical techniques and adaptation measures including investment in medium and large-scale water infrastructure, reforestation, flood-control infrastructure, and watershed management developed to improve ecosystem resilience of critical watersheds, rangelands and forested areas through government support	<p>Unsustainable water and natural resource management practices</p> <p>Limited knowledge and capacity to respond to climate change on national and local levels</p>	<p><b>Alternative 1:</b> If no technical studies are conducted (cost = 0 USD) or not sufficiently informed by hydro-geotechnical experts, it is possible that poor water source locations will be chosen with insufficient capacity and/or poor water quality due to a lack of informed guidance by hydro-geotechnical surveys. Moreover, if water quality samples are not monitored, a baseline of water quality in the regions cannot be established to ensure water quality does not deteriorate.</p> <p><b>Alternative 2:</b> Boreholes (100,000 USD each); Based on Stakeholder consultations and validation workshops, boreholes cause unplanned sedentarization (i.e., sedentism) of pastoralists which will perturb existing socio-economic patterns and cultural traditions. Boreholes have also adversely impacted water quality due to inappropriate siting and difficult operation and maintenance. The Ministries of Water do not have sufficient capacity to perform O&amp;M as evidenced by the fact that 80% of boreholes in Somaliland are not functioning.</p> <p><b>Alternative 3:</b> Berkads (5,000 USD each); although relatively inexpensive, berkads are not viable options due to their high evaporation rates. Also, berkads are privately owned by people who want to sell water as an enterprise.</p> <p><b>Alternative 4:</b> Recharge basins (15,000 USD each); although relatively inexpensive, recharge basins are not viable options due to their high evaporation rates.</p> <p><b>Alternative 5:</b> A gravity-fed hydropower dam is estimated to cost at least 20 M USD.</p>



OUTPUTS	Barrier Addressed	Alternatives Considered
		<p>The high cost, local inexperience with the design and need for imported materials make this an infeasible option. Earth micro-dams are the preferred option due to their simple design and low-cost.</p> <p><b>Alternative 6:</b> Have pastoralists rely on natural re-vegetation processes. However, the unsustainable use of natural resources and ecosystems limits their ability to curb the impacts of CC and deforestation. It is therefore essential to preserve and protect the existing vegetation, forests, etc so that they can provide the natural resource base necessary for pastoral livelihoods (e.g., preserving natural forage which feed livestock).</p>
<p>2.4 Support for women’s livelihood diversification with the introduction adaptation technologies aimed to reduce dependence on dwindling natural resources</p>	<p>Limited knowledge and capacity to respond to climate change on national and local levels</p>	<p><b>Alternative 1:</b> No baseline study of market: If the market is not well understood, it is more likely a women’s business venture is likely to fail. The baseline study will enable the best adaptation technology to be chosen so that maximum resources can be used for training and to facilitate the success of using the technology.</p> <p><b>Alternative 2:</b> Loans rather than grants for women entrepreneur groups: however, the women require minimal start-up capital for successful enterprise development. Relative to Somali men, Somali women are the best suited to conduct business ventures because they are settled, closer to markets and can take advantage of their preferred status as borrowers of micro-loan products to continue business interventions.</p>

## 2.7 Sustainability of the project

248. The project represents Somalia's first opportunity to implement priorities identified in Somalia's NAPA (2013). Somalia's number one priority was identified as the need to build the climate resilience of agro-pastoralists while simultaneously increasing investment into agriculture and pastoral best practices - both clearly linked by the provision of sustainable land and water management. The LDCF financed project addresses the top priority by initially reinforcing the foundation for adaptation activity implementation by creating an enabled and capacitated institutional environment. Government officials and local CBOs will be trained to plan, implement and monitor resilient-building activities. In order to ensure that communities are the primary beneficiary of interventions, grass-root Community-Based Organizations will be supported, established or re-established where they have become defunct. As evidenced in other projects (PREP), involving local NGO/CBOs has resulted in greater legitimacy and sustainability of project interventions.

249. Similarly, the project will directly address Somalia's NAPA priority 3 on Disaster Risk Management (DRM). Output 1.4 will reinforce national and regional DRM institutional capacities so that the technical agencies can produce and disseminate early warnings. Due to the fact that there are no forecasting centres in Somalia, LDCF funds will be used to establish Climate Monitoring and EWS Centres in all 3 zones.

250. In line with the NAPA priority 3, the project will also support localized DRM at the district level. Output 2.2 will establish district Climate and Disaster Management Committees and localized DRM plans to address specific communities' vulnerabilities to climate change. The Output will also aim to build the capacities and awareness of the district and rural populations so that they can have greater preparedness for climate change impacts.

251. Simultaneously, each zone's environment ministry will house a Climate Change specialist to develop training materials and be tasked with mainstreaming climate change into plans, strategies and policies. Similarly, a Climate Education expert will mainstream a climate module into existing curricula (e.g., Bachelor's in Agriculture) so as to increase the awareness and technical understanding of CCA. Subsequently, 3 students from each zone will be provided scholarships so that they will attend the programmes which have mainstreamed climate modules. The end result will be the generation of a pool of technical staff to serve the understaffed ministries which have often dissolved and been rebuilt in the recent, tumultuous past due to lack of financing.

252. The first component of the project will also facilitate the development of a National Climate Change Policy, which will specify how to channel future diversified funding for climate change adaptation and disaster risk management. Better identification of on-going co-financing / leveraged financing opportunities, and better dissemination of lessons-learned and project impacts will facilitate the sustainability of all project activities in the future. The NCC Policy will be designed to serve cross-sectoral agendas so that support will grow for adaptation- and mitigation-related activities. The policy will be reinforced by supporting a south-south cooperation study tour for national-level representatives so that they can witness a functioning National Climate Change Policy in another African country (e.g., Zambia, Uganda).

253. LDCF funds will also be used to address the primary vulnerability in all zones: the lack of management of natural resources and ecosystem services, which stems from poor land-use policies. A land-use policy will be institutionalized in each zone in order to enforce best, no-regret practices. According to Stakeholder consultations, policy development is seen as critical to stop the current unsustainable, land and water use practices (e.g. deforestation for charcoal production, overgrazing, etc.) which are drastically exacerbating the exposure of communities to climate change.

254. The project will also steer away from reactive approaches to disasters and focus on building preparedness on the national, district and community levels. On the national level, Somalia's first DRR

policy will be created with LDCF funds to enforce risk reduction measures. On the local level, District Disaster Management Committees will be created and will be responsible for capitalizing a transparent, resilience fund in order to ensure that risk measures have the financing to be sustained.

255. In Component 2, water mobilization will drastically enhance the resilience of the regions so that they can have sustainable agro-pastoral practices. An integrated approach to risk management for water mobilization will be used by storing water and groundwater resources. Similarly, water diversion infrastructure and reforestation will serve to reduce the impacts of floods and the consequent need for humanitarian assistance.

256. On-the-farm (in-the-pasture) training through an Agro-Pastoral Field School approach will be an effective mechanism for transferring knowledge on sustainable practices and adaptation technologies. The learning-by-doing training approach for agro-pastoralists and pastoralists will enable them to fully understand how to diversify and rotate their cultivations in addition to making them more drought- and salt-resilient. The focus of the APFS on soil and water conservation and sustainable land management practices will enhance the long-term sustainability of agro-pastoral livelihood systems.

257. LDCF funds will also empower communities to engage with local development activities (e.g. gabion building, nursery development) which will lead to local buy-in and sustainability of outcomes. Nursery development to provide a source of seedlings for the large reforestation areas will provide a source of employment for youth and women. Similarly, Cash for Work schemes, which have been successfully used in Somalia (See Local Economic Development Projects under PREP), will be used to provide employment during water infrastructure construction. To ensure ownership and sustainability of the community-based activities, communities will contribute approximately 20% of the cost of community-based productive infrastructure through financial or in-kind contributions.

258. LDCF funds will be used to heavily involve CBOs in the implementation of the project to ensure that activities continue in the communities after project termination. Benefits of this approach are three-fold; first, the CBOs already have experience and have gained credibility in their communities. Second, capacity reinforcement will ensure that the CBOs can more effectively manage funds and have adequate technical knowledge on agro-pastoralism, pastoralism, reforestation and water point management. Third, the NGOs/CBOs will make the project sustainable in the long-term by organizing and preserving training materials and lessons learned which can easily be transferred for scaling-up to other local communities in Somalia.

259. Finally, by supporting women to diversify their livelihoods through market-based adaptation technologies, the project is explicitly designed to produce long-term resilience for women. The project will enable women to build an asset base that will make them more resilient to climate change. Also, the 30 women-based groups who will receive training in this project will be able to transfer knowledge to other women in their region.

## **2.8 Project replicability**

260. The LDCF1 financed project will set the framework to address climate change by establishing a National Climate Change Policy. LDCF funds will be used to generate a policy which will prioritise adaptation measures. Through this foundation, the Government will have the capacity to mobilize funds and scale-up climate change interventions for mitigation. Development of the Climate Change Policy is also timely because the Initial National Communication to the UNFCCC for Somalia will be prepared during 2015-16. The INC will account for successful LDCF1 interventions that can be replicated to enhance climate change adaptation.

261. Targeted interventions will serve as models for climate sensitive investments for water mobilization, agriculture, forestry and management of climate and disaster risks. An example is the

development of Agro-Pastoral Field Schools (APFS) which will be created to demonstrate best land and water use practices for sustainable production that are suited to the Somali context. A field approach will provide an avenue to adapt traditional knowledge with new practices, which improves the chances of replicability due to the familiarity of the approach to other farmers. Furthermore, small grants will be provided to agro-pastoralists so that they can implement small-scale community-based EbA and NRM measures such as construction of soil bunds and food storage facilities. The small-scale infrastructure and EbA measures are expected to show increases in agricultural productivity and livestock production systems, which will demonstrate to other communities the tangible improvements. The APFS will closely monitor, measure and communicate the results of their activities. These will be shared with surrounding communities.

262. The project also supports the creation of District Disaster Management Committees who will be responsible for training village level CBOs and developing DRM plans specific to district needs. Such knowledge can be transferred to surrounding districts and CBOs by training Master Trainers that can train other communities. Furthermore by reinforcing the capacity of CBOs in not only DRM, but NRM and EbA, they will become empowered to replicate project activity developments (reforestation, water diversions, gabion construction, etc) in adjacent communities.

263. Furthermore, women-based entrepreneurial groups will be trained to market adaptation technologies. By being responsible for farm work and often the entrepreneurs in Somali culture, women will be well-placed to test gender-sensitive adaptation technologies. LDCF funds will be used to study the value-chain of various technologies to identify the market demand and feasibility of small businesses. The project will also train the women-based groups in entrepreneurial skills and marketing. With these skills, the women will be able to demonstrate how to successfully use adaptation technologies to increase productivity, while also increasing income through a business approach. With this approach, they will also have incentive to make a profit and to up-scale the technologies to other women throughout Somalia.

264. Overall, the strength of the proposed interventions lies in that LDCF funds will support CBOs to demonstrate no-regret, easily-adopted adaptation technologies and practices. Also, the NCC Policy will guide prioritised adaptation options and will mobilize funds to upscale adaptation interventions. Under the guidance of UNDP, the project will work in close collaboration with other donors to increase the likelihood that successful interventions can be scaled-up.

## **2.9 Stakeholder involvement**

### *2.9.1 Stakeholder baseline analysis*

265. During project preparation, two extensive field consultations with the Stakeholders are planned. Bilateral and multilateral stakeholder consultations also took place to collect information and confirm costs and management arrangements. The overall goal of stakeholder consultations has been to identify relevant agencies involved with supporting rural community adaptation and disaster risk preparedness, particularly those who will be responsible for continuing project activities in the long-term. Consultations have ensured the proposed project is grounded in local realities whilst being aligned with national policies and will support dryland agro-pastoralists and pastoralists. The activities included under LDCF1 have been prioritized following a thorough screening process and in consultations with the local stakeholders.

The following table shows the list of proposed consultations which will take place to develop the LDCF1 project document. The project outcomes, outputs and activities are based upon the recommendations of the stakeholders given the technical, operational and financial constraints of the project. The role and participation of each agency is indicated by the column headings described in the legend.

### ***Legend***

Inception Consultations – participated in first mission consultations.

Technical Validation Consultations – participated in the secondary consultations used to confirm project activities and costs.

Validation Workshop – participated in the validation workshop.

Baseline Assessment – consulted to provide baseline situation during project development.

Management Arrangements – identified as a member of the project management arrangements (e.g. Steering Committee, etc.).

Risk/Barrier Analysis – consulted to document their view of specific institutional risks or barriers.

Policy/ Strategic Alignment to Priorities – institution has policies/strategies or implements policies / strategies aligned with project priorities.

Co-financing Identification – institutions / organizations which have other projects or existing material to support and be supported by the project financially.

Gender Representation – organization that is concerned with promoting the involvement of women during project development and implementation.

Upscale / Sustainability planning – responsible for scaling-up (duplicating) the project and reinforcing the sustainability of activities after project completion.

Potential Partnerships – Memorandums of Understanding obtained between ministries and institutions to support project implementation.

Furthermore, Somali women have been involved during project development and will continue to be involved during project implementation. Women are an important target group because they are more dependent on natural resources for their livelihoods. Climate change has a strong impact on the female beneficiaries who are living in rural regions and have limited mobility. In addition, women may be excluded from some activities due to cultural norms, or due to lack of capital and ownership arrangements that confer all rights to men in the family (Buhl 2005; Eriksen *et al.* 2005, Eriksen *et al.* 2007). This inequality is compounded by a lack of opportunities arising from limited access to education and information services which prohibit participation in decision-making. Due to all of these reasons, this project is targeting women to develop nurseries and to reinforce their capacities on national and district levels. Relevant gender-focused NGOs/CBOs such as the Somali Women Association will be involved during project design and implementation to facilitate the engagement and empowerment of women.

Table 8: Stakeholder Involvement Matrix

Stakeholder	Inception Consultations	Technical Validation Consultations	Validation Workshop	Involvement in Baseline Assessment	Management Arrangements	Risk/Barrier Analysis	Policy/ Strategic Alignment to Priorities	Co-financing Identification	Gender Representation	Upscale Sustainability Planning	Potential Partnerships
Government											
Office of the President (South Central)	X	X	X	X	X	X	X	X	X	X	X
Ministry of Petroleum, Minerals and Environment (South Central)	X	X	X	X	X	X	X	X	X	X	X
Ministry of Environment, Wildlife and Tourism (Puntland)	X	X	X	X	X	X	X	X	X	X	X
Ministry of Environment and Rural Development (Somaliland)	X	X	X	X	X	X	X	X	X	X	X
Ministry of Agriculture (all zones)		X		X		X	X	X	X		
Ministry of Water (Puntland and South Central)		X		X		X	X	X	X		
Ministry of Livestock (all zones)		X		X		X	X	X	X		

Stakeholder	Inception Consultations	Technical Validation Consultations	Validation Workshop	Involvement in Baseline Assessment	Management Arrangements	Risk/Barrier Analysis	Policy/ Strategic Alignment to Priorities	Co-financing Identification	Gender Representation	Upscale Sustainability Planning	Potential Partnerships
Ministry of Women and Family Affairs (Puntland)		X		X		X	X	X	X		
Ministry of Planning (all zones)		X		X		X	X	X	X		
National Environment Research and Disaster Preparedness and Management Authority (Somaliland)	X	X	X	X		X	X	X	X		
Humanitarian Affairs and Disaster Management Authority (Puntland)		X	X	X		X	X	X	X		
Somali Disaster Management Authority		X		X		X	X	X	X		
Ministry of Energy (Somaliland)		X		X		X	X	X	X		
Parliamentarians (Somaliland)		X		X		X	X	X	X		
Technical Research /											



Stakeholder	Inception Consultations	Technical Validation Consultations	Validation Workshop	Involvement in Baseline Assessment	Management Arrangements	Risk/Barrier Analysis	Policy/ Strategic Alignment to Priorities	Co-financing Identification	Gender Representation	Upscale Sustainability Planning	Potential Partnerships
Institutions											
Hergeisa University		X		X							
Puntland State University		X		X							
Regional/ Sector											
District of Jowhar (community leaders, women representatives, local government officials)	X	X	X	X		X			X	X	
District of Jowhar, Balan Bale, Guriel, Afgoye, Bandar Bayla, Dangoroyo, Burao, Hargeisa, (community leaders, women representatives, youth representatives, local government officials)		X		X	X	X			X	X	
NGOs/CSOs											

Stakeholder	Inception Consultations	Technical Validation Consultations	Validation Workshop	Involvement in Baseline Assessment	Management Arrangements	Risk/Barrier Analysis	Policy/ Strategic Alignment to Priorities	Co-financing Identification	Gender Representation	Upscale Sustainability Planning	Potential Partnerships
Candlelight	X	X	X	X		X			X	X	X
African Development Solutions (ADESO)	X	X	X	X		X			X	X	X
Somali Women Association	X	X	X	X		X			X	X	X
Havoyoco	X	X	X	X		X			X	X	X
Care International	X	X	X	X		X			X	X	X
Donor Partners											
UNDP	X	X	X	X	X	X	X	X	X	X	X
European Union / European Commission			X	X				X		X	X
African Development Bank, AfDB			X	X						X	X
Intergovernmental Authority on Development (IGAD)			X	X						X	X
UNDP Drylands			X	X						X	X
UNEP			X	X						X	X
United Nations High Commissioner for Refugees			X	X						X	X

Stakeholder	Inception Consultations	Technical Validation Consultations	Validation Workshop	Involvement in Baseline Assessment	Management Arrangements	Risk/Barrier Analysis	Policy/ Strategic Alignment to Priorities	Co-financing Identification	Gender Representation	Upscale Sustainability Planning /	Potential Partnerships
(UNHCR)											
UN Food and Agriculture Organization (FAO)			X	X						X	X
UN OCHA			X	X						X	X

### 2.9.2 *Stakeholder involvement plan*

266. The stakeholders identified during project preparation will continue to be involved during project implementation. A Stakeholder Involvement Plan has been created to provide a framework to guide interactions between implementing partners and the key stakeholders, particularly end-users, to validate project progress. A multi-disciplinary team will be responsible for the engagement of the stakeholders to ensure that the project is able to achieve its objectives. All stakeholders involved in the baseline self-capacity assessment will be addressed again in order to track the efficacy of stakeholder capacity building, both operationally and technically. Also, the National Women's Union will continue to be involved and consulted in order to ensure women are properly trained and engaged. Gender-focused NGOs/CSOs will have the role of conducting gender-disaggregated surveys to ensure women develop skills to diversify their livelihoods and are involved in decision-making. Details of the Stakeholder Involvement Plan are provided in Annex 6.

### 2.9.3 *Expected Socio-economic and Environmental Benefits*

267. The project will have significant adaptation and socio-economic benefits. Overall, the project will provide climate change awareness and support preparedness measures for approximately 43,000 agro-pastorals and pastoralists in all three zones of Somalia (half of which are expected to be female). At least 7,200 households will be beneficiaries of water mobilization and diversion and will also be provided with climate change awareness due to community involvement with construction, infrastructure O&M and working with the CBOs who will be supported by LDCF funds. The LDCF financed project will also provide training on Public Administration for 60 government officials so that they will have the capacity to manage climate adaptation projects. At least 30% of the ministry staff who will receive training will be women. In order to support understaffed ministries, 9 students, including women, will be sponsored to attend environmentally – and Natural Resource Management- focused higher degree programmes which will increase their technical capacity.

268. LDCF funds will also provide training on climate change adaptation for 150 beneficiaries. Public awareness campaigns on the environment, Climate Change and associated policies, most notably the Land Use Policies to be created in each zone, are predicted to benefit at least 1 million people.

269. In terms of Disaster Risk Management (DRM), a Climate Monitoring / Early Warning System Centre (CM/EWS) will be created in both Puntland and Somaliland. DRM training will be provided for five CM/EWS staff as well as five DRM focal points in the relevant ministries in South Central. A National Disaster Management Policy, with clear roles and responsibilities defined and a comprehensive survey of the capacity needs for managing disaster risks will also be generated. On a local level, each district will be supported to establish Disaster Management Committees (DDMCs). Each committee will consist of 15 people. The DDMCs will be responsible for generating DRM plans specific to the district. It is expected that the DRM plans will benefit at least 20% of the target populations. For example, in Somaliland 120 villages in Hergeisa and 110 villages in Burao are expected to benefit from the DRM plans.

270. Sixteen agro-pastoral Field Schools (APFS) will also be created (2 in each target area) using LDCF funds. The schools will teach both farmers and pastoralists about best practices to help them build resilience to climate change such as Soil and Water Conservation methods. Training will be provided to a Master trainer who will be responsible for training facilitators in each APFS. Two hundred (200) agro-pastoralists in each APFS will be direct beneficiaries trainings.

271. On a local level, 9 CBOs will be supported with grants to implement small-scale, community-based EbA and NRM measures, such as soil bunds, small ponds, etc. As each CBO consists of 10 people (including 3 women), it is estimated that 90 CBO members will benefit from the targeted trainings. In addition to the CBO-led NRM measures, each zone will benefit from 200 hectares of reforestation. The

number of rural people who are expected to benefit from improved forest ecosystems is approximately 20,000 per zone.

272. Most significantly, large water mobilization works will benefit the entire population of each district. In Somaliland, it is expected that 30,000 people will be beneficiaries of the water provision and flood control measures. Similarly, in South Central, over 60,000 people are expected to benefit from water mobilization. Significant short-term employment will also be generated during construction using such schemes as Cash for Work.

273. Finally, women are expected to greatly benefit from project interventions by improving their power and presence in national and community-based decision making. Training programmes and workshops will have at least 30% women. At least one woman per zone will also be supported to represent Somalia in international and regional climate negotiations. Also, at least 1 one women per zone will be supported financially to attend university programmes with updated climate modules.

274. In Component 2, at least 40 women (5 per district) will be included as decision-makers in the District Disaster Management Committees to implement community-based adaptation measures based on gender-sensitive priorities. Furthermore, at least 300 women will be recipients of training on value-chain analysis and marketing, initial capital and assistance with setting up the business.

275. To ensure minimal environmental and social impacts, an Environmental Impact Assessment will be conducted during the first 3 months of the project. Due to the fact that only Somaliland has a legally recognized EIA procedure, an EIA process that is recognized by international standards will be funded by the project. During project development, the project has also been designed to adhere to the UNDP Environmental and Social Screening Procedure. The screening classified the project as Category C (See Annex 9). As such, the following mitigation measures are recommended and will be re-visited at the time of the detailed EIA:

276. Environmental safeguards being applied to the LDCF1 project include the following:

- Conducting in-depth hydro-geotechnical studies to ensure that water mobilisation infrastructure will support sufficient water supply, taking into account storage needs during the dry season and downstream water rights;
- Providing on-the-farm and in-the-pasture training on sustainable adaptation technologies (e.g. equipment/practices which reduce erosion and limit degradation) through Farmer and Pastoral Field Schools;
- Training farmers and pastoralists on the value of ecosystem based services and how adaptation measures such as Soil and Water Conservation measures need to be used to ensure the productivity of ecosystems;
- Training locally based district Disaster Management Committees on drought/flood mitigation and preparedness strategies in order to ensure they can transfer such knowledge to surrounding communities after termination of the project (e.g., how to protect water sources);
- Using native plant species for reforestation/afforestation;

277. Social safeguards being applied include the following:

- Engaging a NGO to do a water / land rights study for the eight districts to ensure that there will not be conflicts over natural resource appropriations;
- Recruiting international experts of Somali origin so they can more freely assist with project implementation;
- Consulting elder leaders, religious leaders and clan leaders while designing and implementing adaptation activities to ensure community approval and ownership;

- Support women based groups to diversify their livelihoods and income services by creating businesses to promote adaptation technologies (e.g., sales of solar pumps);
- Implicating youth by incentivizing them to study fields with climate consideration (e.g., agriculture, civil engineering) and providing them employment after technical capacity building to serve in the understaffed environmentally-related ministries;
- Increasing the representation of women in decision-making, strategy development and climate negotiations;
- Accounting for the gender dimensions of climate change in policies and plans to be developed or updated;
- Implementing small-scale, community-based EbA and NRM measures based on priorities identified by women.

### 3 PROJECT RESULTS FRAMEWORK

<p><b>This project will contribute to achieving the following Country Programme Outcome as defined in CPAP or CPD:</b>          CPD Outcome 3: Somali women and men benefit from increased sustainable livelihood opportunities and improved natural resources management</p>					
<p><b>Country Programme Outcome Indicators:</b>          CPD Indicator 3b: Improved natural resource management</p>					
<p><b>Primary Applicable Key Environment and Sustainable Development Key Result Area (same as that on the cover page, circle one):</b>          Promote climate change adaptation</p>					
<p><b>Applicable GEF Strategic Objective and Program:</b>          Climate Change Adaptation Objective 2 “Increase adaptive capacity to respond to the impact of climate change, including variability, at local, national, regional and global level”</p>					
<p><b>Applicable GEF Expected Outcomes:</b>          Outcome 2.1: Increased knowledge and understanding of climate variability and change-induced risks at country level and in targeted vulnerable areas          Outcome 2.2: Strengthened adaptive capacity to reduce risks to climate-induced economic losses.          Outcome 2.3: Strengthened awareness and ownership of adaptation and climate risk reduction processes at local level          Outcome 3.1: Successful demonstration and deployment of relevant adaptation technology in targeted areas</p>					
<p><b>Applicable GEF Outcome Indicators:</b></p> <ul style="list-style-type: none"> <li>% of population covered by climate change risk reduction measures</li> </ul>					
	INDICATOR	BASELINE	END OF PROJECT TARGETS	SOURCE OF INFORMATION	RISKS AND ASSUMPTIONS
<p><b>Project Objective<sup>56</sup></b>          Enhanced resilience and improved adaptive capacity of vulnerable Somali communities in pilot areas, and the ecosystems on which they depend, to the adverse impacts</p>	<p>1. % of men and women in targeted community population with awareness of predicted adverse impacts of climate change and appropriate responses (AMAT 2.3.1)</p>	<p>1. 70% of the rural populations are pastoralists or farmers. Both livelihoods are vulnerable to climate change impacts, most notably droughts and floods. Scarce water resources, depleted forests and unsustainable natural resource management practices (e.g., charcoal production) are exacerbating the impacts of climate change.</p> <p><u>BASELINE 1:</u> Less than 25% of the rural populations have knowledge on how to respond to and prepare for</p>	<p><u>TARGET 1:</u> 60% of target men and women (approximately 43,000 people) have awareness and knowledge on adaptation responses to Climate Change<sup>57</sup></p>	<p>1. Socio-economic baseline and final evaluation surveys on climate change awareness amongst target populations</p>	<p>ASSUMPTION: Local communities are incentivized to implement climate resilience-building measures due to sufficient sensitization on climate change impacts.</p> <p>RISK: Water and natural resource management strategies are made ineffective by an unanticipated increase in the frequency of flood events and continued</p>

<sup>56</sup> Objective (Atlas output) monitored quarterly ERBM and annually in APR/PIR.

<sup>57</sup> Agro-pastoralists and pastoralists will be provided with climate change awareness due to community involvement with construction, infrastructure O&M and working with CBOs.



of climate change.		droughts and floods.			drought which jeopardizes agricultural and pastoral production
	2. Percentage of targeted HHs with enhanced livelihoods through access to water, improved ecosystem services and reforestation (AMAT 1.3.1.1)	<u>BASELINE 2:</u> 0% of the targeted HHs has livelihoods resilient to climate shocks. Livelihoods need to be strengthened by mobilizing water with physical infrastructure for use during the dry season (e.g., earth dams and retention basins, boreholes, etc). Also, livelihoods need to be strengthened with reforestation/afforestation and sustainable land use practices. Farmers and pastoralists need to be provided technical and applied knowledge on soil and water conservation methods and other sustainable practices to ensure that they can continually make use of productive ecosystem services.	<u>TARGET 2:</u> 100% of all targeted 7,200 <sup>58</sup> HHs for all zones have enhanced livelihoods through access to water, improved ecosystem services and reforestation	2. Socio-economic baseline and final evaluation surveys on strengthened livelihoods	RISK: Security risks could affect project implementation, particularly clan-based conflicts over competing uses of natural resources.
<b>Outcome 1:</b> Policies, plans and tools reviewed, revised, developed, adopted and implemented by government to mainstream and enhance adaptive capacity and mitigate the risks of climate change on vulnerable communities and critical ecosystem	1. Number of Land Use Policies and implementation roadmaps developed that support sustainable Natural Resources Management (AMAT 1.1.1)	<u>BASELINE 1:</u> Land use policies and proper enforcement mechanisms on land-use do not exist in all zones of Somalia. This has led to conflicts over natural resources and exacerbated tensions between grazing nomadic pastoralists and sedentary agro-pastoralists. Rural populations are also using land in an ad-hoc manner, cutting trees to produce charcoal and encroaching on grazing lands.	<u>TARGET 1:</u> A Land Use Policy in each zone (Somaliland, Puntland and South Central) is developed.	1. Review of the Land Use Policies	ASSUMPTION: There is sufficient political support and capacity (including capacity building activities) within the agencies dealing with adaptation for successful execution and implementation of the project.  ASSUMPTION: Relevant Ministries have an interest in fully integrating adaptation strategies into their long-term planning.
	2. Number and type of plans and policies in place to address climate risks and include climate-resilient measures	<u>BASELINE 2:</u> Other than the NAPA (2013), there are no policies, strategies or development plans which address how to effectively adapt to climate risks. Policies on the environment and disaster risk management exist, such	<u>TARGET 2:</u> Development of a gender-sensitive National Disaster Management Policy	2. Review of the uptake of adaptation measures to climate change in existing	ASSUMPTION: The Government of Somalia has

<sup>58</sup> 1,000 HHs in each target community in South Central will benefit from large-scale water mobilization (4,000 HHs total approximately). 500 HHs per large-scale water mobilization and diversions and 300 HHs per small infrastructure in Somaliland and Puntland target communities (1,600 HHs approximately in both Somaliland and Puntland).

services	(AMAT 1.1.1 and UNDP 2.5.1)	as the National Policy on Environment in Somaliland and a Disaster Risk Reduction Framework in Puntland, however, none of these address climate risks and includes adaptation measures.	and at least 3 existing plans/policies are updated to address climate risks	plans/policies	sufficient incentive to design funds earmarked to support the environment and climate change that can be effectively targeted towards long-term adaptation-related activities in a transparent manner with appropriate financial management.
	3. Type and level of development frameworks that include specific budgets for adaptation actions (AMAT 1.1.1.1)	<u>BASELINE 3:</u> With the New Deal Compact, Somalia has received over USD 50 million in donor support to address NRM issues through projects such as EU's MDG project, PREP, PROSCAL and FAO SWALIM programmes. However, these projects/programmes have a limited duration (on average 4 years). With climate change proven to worsen in the decades to come, national and regional governments require mobilization of long-term financing. Financing must be earmarked for adaptation measures across sectors to target capacity building, activities, projects or programmes that build resilience to climate change.	<u>TARGET 3:</u> Development of the National Climate Change Policy including a fund mobilization strategy to raise public and private financing earmarked for climate change adaptation in all zones	3. National Climate Change Policy and accounting records on financing earmarked for adaptation	RISK: A low level of cooperation between executing institutions due to political divisions and the existence of three distinct zones of Federal Somalia, Puntland and Somaliland makes the coordination of policy development challenging. RISK: The project could encounter delays due to the lack of nationally-available expertise and human resources RISK: Limited climate monitoring inhibits forecasting capabilities and the ability to develop detailed spatial mapping to allow for adequate adaptation and risk reduction planning
<b>Outcome 2</b> Models of community ecosystem resilience developed and	1. Number and type of physical livelihood assets constructed to reduce the impacts of floods and droughts (AMAT 1.2.1.8)	<u>BASELINE 1:</u> The rural populations are at extreme risk because they do not have sufficient water for drinking and irrigation. They are also subject to loss of crops and livestock due to the fact that the most fertile areas are within or adjacent to wadis which are	<u>TARGET 1:</u> Design and construction of 2 50,000 m3 earth dams in Puntland and Somaliland, rehabilitation of 4 dams in South	1. Construction log of the Ministries of Water, Agriculture and the Environment	ASSUMPTION: Initial hydrogeological studies and technical assessments are accurate in their predictions of water capture and storage capacities.

implemented in pilot areas selected in consultation with government and community stakeholders		susceptible to flash flooding. Moreover, during the high rainy periods, runoff cannot be effectively stored for use during the dry season. Therefore, there is a need to construct physical infrastructure to mobilize surface water and groundwater.	Central, 6, 5 and 8 water diversions constructed in Puntland, Somaliland and South Central respectively, rehabilitation of 4 canals in South Central and rehabilitation of 4 boreholes in South Central		ASSUMPTION: Local populations, including nomadic pastoralists, will not trespass into protected reforestation and re-vegetation areas due to being informed of the purpose of these areas to restore the natural environment and reduce erosion RISK: Water ministries have limited capacity to design, construct and perform maintenance on water mobilization infrastructure RISK: There is insufficient technical and operational capacity within the regional governments to coordinate drought and flood preparedness and to implement unfamiliar Ecosystem-based Adaptation actions
	2. Number of hectares of land reforested and managed sustainably under a conservation scheme (AMAT 2.3.1.1, UNDP SP Outcome 1, Indicator 5)	<u>BASELINE 2:</u> Due to poor natural resource management and significant tree removal for charcoal production, agro-pastoralists and pastoralists are losing their forests. Consequently, agro-pastoralists do not have sustainable livelihoods and the region is subject to significant erosion and climate change impacts.	<u>TARGET 2:</u> 200 ha reforested in each zone	2. Reforestation/Afforestation records kept by the Ministries of Agriculture and the Environment	RISK: The lack of politically recognized Environmental Impact Assessment procedures causes unforeseen adverse social/environmental impacts such as downstream impacts due to water mobilization and retention infrastructure RISK: Targeted farmers and pastoralists are skeptical and unwilling to use adaptation technologies /
	3. Number of farmers and pastoralists in the target districts participating in Agro-Pastoral Field Schools (disaggregated by gender) (AMAT 2.2.1.1)	<u>BASELINE 3:</u> The agro-pastoral communities have no capacity to produce diversified crops and develop more sustainable agro-pastoral and pastoral practices (e.g. using soil and water conservation methods, producing drought-tolerant forage). The pastoralists in each region have had no capacity reinforcement on soil conservation measures, re-seeding, veterinary medicine and animal hygiene to ensure more sustainable pastoralist practices.	<u>TARGET 3:</u> 16 Agro-Pastoral Field Schools (APFS) established (2 in each district) with 200 direct beneficiaries per APFS (30% women)	3. Farmer Field School and Pastoral Field School training logs	
	4. Number of community driven plans that explicitly address disaster and climate risk management and	4. There are no district level, or community level, disaster management capacities. If early warning information is provided to communities, it is usually passed on in a very ad-hoc, uncoordinated manner	<u>TARGET 4:</u> One (1) gender-sensitive plan developed by each District Disaster Management Committee to be	4a. Conventions signed, confirming creation of District Disaster Management	

	<p>equity / gender considerations which include Monitoring and Evaluation mechanisms (AMAT 2.2.1 and UNDP SP 5.2.1)</p>	<p>by leaders to others through SMS or word of mouth. <b>BASELINE 4:</b> Disaster Management Committees are required to be developed in each district. The DDMCs must be tasked with preparing targeted, community-based, gender-sensitive disaster preparedness plans to mitigate the impacts of droughts and floods.</p>	<p>created (with women representation) in the eight target districts (8 plans total)</p>	<p>Committees 4b. Review of the DRM plans of the District Disaster Management Committees</p>	<p>practices so as to diversify their livelihoods and/or income diversification strategies do not significantly increase household incomes</p>
	<p>5. Number of individuals trained in adaptation technologies in order to establish women-based marketing businesses for the technologies (AMAT 3.2.1.1)</p>	<p><b>BASELINE 5:</b> Currently, women are particularly vulnerable to climate shocks due to their dependence on natural resources. Women require awareness and training on available adaptation technologies which will enable them to build resilience to climate change (e.g., water harvesting buckets, solar water pumps, drip irrigation systems). Women are more often than men, involved in operating small businesses due to their entrepreneurial spirit as well as for historical and cultural reasons (e.g., Somali women are responsible for working on farms.) Women are thus best placed to pilot and market adaptation technologies.</p>	<p>5. 300 women trained in adaptation technologies as a foundation for starting sustainable technology marketing enterprises</p>	<p>5. Baseline and final survey of women-based groups which are promoting adaptation technologies</p>	

#### 4 TOTAL BUDGET AND WORKPLAN

<b>Award ID:</b>	00077821	<b>Project ID(s):</b>	00091197
<b>Award Title:</b>	Enhancing Climate Resilience: Somalia		
<b>Business Unit:</b>	SOM10		
<b>Project Title:</b>	Enhancing Climate Resilience of the Vulnerable Communities and Ecosystems in Somalia		
<b>PIMS no.</b>	5268		
<b>Implementing Partner (Executing Agency)</b>	United Nations Development Programme, Somalia Country Office		

SOF (e.g. GEF) Outcome/Atlas Activity	Responsible Party/ Implementing Agent	Fund ID	Donor Name	Atlas Budgetary Account Code	ATLAS Budget Description	Amount Year 1 (USD)	Amount Year 2 (USD)	Amount Year 3 (USD)	Amount Year 4 (USD)	Total (USD)	See Budget Notes:
<b>OUTCOME 1:</b> Institutional capacities for coordinated, climate-resilient planning strengthened. Mechanisms and a de-risked investment environment established to catalyse finance for climate change adaptation.	<b>UNDP</b>	<b>62160</b>	<b>LDCF</b>	71200	International Expert <sup>59</sup>	146,000	161,000	0	0	307,000	A
				71300	National Expert	294,000	282,000	282,000	282,000	1,140,000	B
				71400	Contractual Services - Indiv	39,000	55,000	70,000	30,000	194,000	C
				72100	Contractual Services Co.	0	20,000	20,000	0	40,000	D
				72200	Equipment & Furniture	10,000	10,000	0	0	20,000	E
				72400	Communic & Audio Visual Equip	0	11,500	0	0	11,500	F
				72500	Supplies	5,000	0	0	0	5,000	G
				72600	Grants	27,000	27,000	27,000	27,000	108,000	H

<sup>59</sup> With preference given to experts of Somali origin

				75700	Training, Workshops & Conferences	96,000	58,500	20,000	20,000	194,500	I		
					<b>sub-total LDCF</b>	<b>617,000</b>	<b>625,000</b>	<b>419,000</b>	<b>359,000</b>	<b>2,020,000</b>			
	<b>4000</b>	<b>UNDP</b>		72400	Grant	38,500	38,500	38,500	38,500	154,000			
					<b>sub-total Grants</b>	<b>38,500</b>	<b>38,500</b>	<b>38,500</b>	<b>38,500</b>	<b>154,000</b>			
					<b>Total Outcome 1</b>	<b>655,500</b>	<b>663,500</b>	<b>457,500</b>	<b>397,500</b>	<b>2,174,000</b>			
<b>OUTCOME 2:</b> Improved water management in the targeted regions to conserve scarce water resources and manage temporal flows to reduce flooding and erosion.	<b>UNDP</b>	<b>62160</b>	<b>LDCF</b>	71200	International Expert	0	0	84,000	0	84,000	J		
				71300	National Expert	24,000	0	0	48,000	72,000	K		
				71400	Contractual Services Ind.	320,000	565,000	570,000	336,000	1,791,000	L		
				72100	Contractual Services Co.	1,007,000	665,000	515,000	259,000	2,446,000	M		
				72300	Materials & Goods	32,000	32,000	32,000	32,000	128,000	N		
				72600	Grants	0	20,000	260,000	260,000	540,000	O		
				75700	Training, Workshops & Conferences	274,000	209,000	25,000	41,000	549,000	P		
					<b>sub-total GEF</b>	<b>1,657,000</b>	<b>1,491,000</b>	<b>1,486,000</b>	<b>976,000</b>	<b>5,610,000</b>			
				<b>4000</b>	<b>UNDP</b>	72400	Grant	38,500	38,500	38,500	38,500	154,000	
							<b>sub-total Grants</b>	<b>38,500</b>	<b>38,500</b>	<b>38,500</b>	<b>38,500</b>	<b>154,000</b>	
					<b>Total Outcome 2</b>	<b>1,695,500</b>	<b>1,529,500</b>	<b>1,524,500</b>	<b>1,014,500</b>	<b>5,764,000</b>			
<b>PROJECT MANAGEMENT UNIT</b>	<b>UNDP</b>	<b>62160</b>	<b>LDCF</b>	71600	Travel	5,000	5,000	5,000	5,000	20,000	Q		
				71400	Contractual Services Ind.	85,500	85,500	85,500	85,500	342,000	R		
				72500	Supplies	2,000	2,000	2,000	2,000	8,000	S		
					<b>sub-total</b>	<b>92,500</b>	<b>92,500</b>	<b>92,500</b>	<b>92,500</b>	<b>370,000</b>			

				<b>Total Management</b>	<b>92,500</b>	<b>92,500</b>	<b>92,500</b>	<b>92,500</b>	<b>370,000</b>	
<b>PROJECT TOTAL</b>					<b>2,443,500 *</b>	<b>2,285,500</b>	<b>2,074,500</b>	<b>1,504,500</b>	<b>8,308,000</b>	

\* The first year disbursement includes major investments towards capacity building of numerous national and regional institutions as well as the communities within the three zones of Somalia which each have their independent administrative set-ups. All three zones follow their own national plans that consider their respective needs and priorities. The LDCF1 financed project will have to initiate activities in all three regions simultaneously from the 1st Year – hence the need for a greater disbursement than normal during the 1st year (relative to other GEF financed projects). Any major factors that may delay the work plan will be highlighted in the annual PIR to take necessary decisions during the course of implementation.

#### Summary of Funds:<sup>60</sup>

	<b>Amount Year 1</b>	<b>Amount Year 2</b>	<b>Amount Year 3</b>	<b>Amount Year 4</b>	<b>Total</b>
GEF	2,366,500	2,208,500	1,997,500	1,427,500	8,000,000
Ministry of Petroleum, Minerals and Environment, Government of Somalia	2,000,000	2,000,000	2,000,000	2,000,000	8,000,000
UNDP TRAC funding for Poverty Reduction and Environment Protection Programme (PREP)	375,000	375,000	375,000	375,000	1,500,000
Poverty Reduction and Environment Protection Programme (PREP)	2,250,000	2,250,000	2,250,000	2,250,000	9,000,000
UN's Joint Programme for Sustainable Charcoal Production and Alternative Livelihoods (PROSCAL)	3,080,000	3,080,000	3,080,000	3,080,000	12,320,000
EU's MDG initiative for Somalia - Reducing hunger and food insecurity in Puntland region through improved and sustainable use of rangeland resources	8,500,000	8,500,000	8,500,000	8,500,000	34,000,000
<b>TOTAL</b>	<b>18,571,500</b>	<b>18,413,500</b>	<b>18,202,500</b>	<b>17,632,500</b>	<b>72,820,000</b>

<b>Budget Note</b>	<b>Description of cost item (Activity number)</b>
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<sup>60</sup> Summary table should include all financing of all kinds: GEF financing, cofinancing, cash, in-kind, etc...



A	<p>International Expert (with preference given to experts of Somali origin) to support:</p> <ul style="list-style-type: none"> <li>- Training and workshops to build capacity in managing climate adaptation projects for 20 government officials for each zone (1.1.1)</li> <li>- Climate Module development for the University of Hergeisa, Puntland State University and one University in South Central, to be decided after a brief assessment (1.1.3)</li> <li>- The Planning Ministries and the National Climate Change Secretariat (See below) to carry out a study to identify a mix of financing sources to mobilize funds for Climate Change Adaptation (1.2.3)</li> <li>- Establishment of Land Policy Development Teams within the Land Planning Units of the Ministries of Planning. (1.3.3)</li> <li>- Preparation of a National Disaster Management Policy, with clear roles and responsibilities defined and a comprehensive survey of the capacity needs for managing disaster risks. This DRR Policy Advisor will be hired for 3 months and placed at the MoPMR and will work with SDMA and line ministers for the development of the policy (South Central) (1.4.1)</li> <li>- Establishment of Climate Monitoring and Early Warning Systems Centres in NERAD/HADMA (Somaliland and Puntland) Support for ministry focal points in South Central and within SDMA to disseminate relevant warnings (1.4.3)</li> </ul>
B	<p>National Expert to support:</p> <ul style="list-style-type: none"> <li>- Training material development and to conduct workshops on the basics principles of climate change and adaptation for relevant government institutions for 50 participants in each region (1.1.2)</li> <li>- Detailed sectoral analysis preparation of climate vulnerabilities and the socioeconomic and gendered impacts of climate change for water, agriculture, livestock and energy sectors in coordination with the IGAD ICPAC (1.2.1)</li> <li>- Establishment of Land Policy Development Teams within the Land Planning Units of the Ministries of Planning. (1.3.3)</li> <li>- Development of a database and information management system (1.3.6)</li> <li>- Establishment of Climate Monitoring and Early Warning Systems Centres in NERAD/HADMA (Somaliland and Puntland) and to train ministry focal points in South Central and SDMA to disseminate relevant warnings. (1.4.3)</li> </ul>
C	<p>Individual Contractual Service agreement to support:</p> <ul style="list-style-type: none"> <li>- Detailed sectoral analyses of climate vulnerabilities and the socioeconomic and gendered impacts of climate change (1.2.1)</li> <li>- Each ministry with the integration of climate change, placing emphasis on the gender aspects of impacts and adaptation measures, into existing sectoral policies, plans, laws and regulatory frameworks and ensuring appropriate representation of the sectors (1.2.2)</li> <li>- Development of Land-Use Policies in each zone which are based on principles of integrated land and water management (1.3.4)</li> <li>- Technical surveys, in collaboration with SWALIM, to establish an updated baseline for land-use reports for each zone (1.3.5)</li> <li>- Development of a comprehensive Program Document/Capacity Needs Assessment for the DRM sector in Puntland.(1.4.2)</li> <li>- Knowledge Management; Monitoring and Evaluation and Audit for all outputs of Component 1</li> </ul>
D	<ul style="list-style-type: none"> <li>- Contractual Service agreement with a Company to develop a National Climate Change Policy, taking into account the sectoral vulnerabilities, impacts and costs for adaptation (Federal Somalia) (1.3.1)</li> </ul>
E	<ul style="list-style-type: none"> <li>- Equipment for the development of a database and information management system (1.3.6)</li> </ul>
F	<ul style="list-style-type: none"> <li>- Provision of warning communication equipment for CM/EWS centres in NERAD/HADMA and for the CM/EWS focal points within SDMA in South Central (1.4.5)</li> </ul>
G	<ul style="list-style-type: none"> <li>- Materials and Goods to support development of training materials and to conduct workshops on the basics principles of climate change and adaptation for relevant government institutions for 50 participants in each region (1.1.2)</li> </ul>
H	<ul style="list-style-type: none"> <li>- Three national students per zone will be supported with grants to attend environment/natural resource management higher degree programs and have CC mainstreamed into their programmes of study (1.1.4)</li> </ul>

I	<ul style="list-style-type: none"> <li>- Training and workshops to build capacity in managing climate adaptation projects for 20 government officials for each zone (1.1.1)</li> <li>- Training materials and workshops on the basics principles of climate change and adaptation for relevant government institutions (1.1.2)</li> <li>- Training by a Climate Change education expert on the Climate Module to be offered by select Universities (1.1.3)</li> <li>- Training for relevant government officials (3 from each zone) to attend, participate and represent Somalia's interests in climate discussions and negotiations (1.3.2)</li> <li>- Training on the development of a database and information management system (1.3.6)</li> <li>- Training for the CM/EWS centres and the SMDA staff. The role of the CM/EWS centres and SDMA will be to carry out Disaster Risk Reduction and early warning dissemination including testing of the EWS and message dissemination systems. (1.4.4)</li> </ul>
J	<ul style="list-style-type: none"> <li>- Recruitment of an International Expert (with preference given to an expert of Somali origin) to conduct research and documentation on the most relevant international best practices on the cultivation and uses of drought-resilient seeds and plants for food, fodder and forestry carried out to support EbA and NRM plan implementation (2.1.2)</li> </ul>
K	<p>National Experts to support:</p> <ul style="list-style-type: none"> <li>- Development of Arid and Semi-Arid (ASAL) Zone Adaptation Plans for Somaliland and Puntland and a Shabelle Basin Adaptation Plan for South Central basin (2.1.1)</li> <li>- Feasibility studies, design documents and EIAs for the planned infrastructure and target watershed/drainage basins including topographical, hydrological, hydrogeological, geotechnical and surface water balance studies to support adaptation technology design and siting of infrastructure. (2.3.1)</li> </ul>
L	<p>Individual Contractual Service agreement to support:</p> <ul style="list-style-type: none"> <li>- A mass awareness campaign with distinct strategies for local communities/NGOs/CSOs to disseminate information on existing policies and regulations (2.1.4)</li> <li>- The district DDMCs/CBOs in establishing a resilience fund with proper transparency and accountability mechanisms to be used to finance operation and maintenance costs for community-based infrastructure and disaster preparedness measures (2.2.4)</li> <li>- Rehabilitation / Construction of dams in all 4 target districts (South Central) (2.3.13)</li> <li>- Rehabilitation of 2 boreholes in Balanbale and 2 in Guriel (South Central) (2.3.14)</li> <li>- Construction of 8 new water diversion/flood routing structures, 2 in each district (South Central) (2.3.15)</li> <li>- Training for establishing tree nurseries, fodder production, farms and livestock watering points near the water sites (South Central) (2.3.16)</li> <li>- Reforestation along 200 ha in appropriate areas within the target drainage basin, particularly around the newly constructed water infrastructure and in severely degraded areas (South Central) (2.3.17)</li> <li>- Visibility including signage at infrastructure sites to promote awareness of interventions (2.5.1)</li> <li>- Knowledge Management, Monitoring and Evaluation and Audit for all outputs of Component 2 (2.5.2)</li> </ul>
M.	<p>A Contractual Service agreement with a local NGO for:</p> <ul style="list-style-type: none"> <li>- Community mobilization and a 6 month training on Natural Resource Management (NRM) and Integrated Water Management (IWM) through the establishment or revival of 3 Community Based Organizations (CBOs) per zone (9 total) (2.1.3)</li> <li>- Establishment of volunteer community-based Disaster Management Committees (DDMC) in Burao, Hargeisa Districts (Somaliland), Dangoroyo and Bandar Bayla Districts (Puntland) and Balanbale, Guriel, Jowhard and Afgooye districts (South Central) by a designated NGO (2.2.1)</li> <li>- Development of community-based DRM plans to address identified Climate Change (CC) and natural risks (2.2.2)</li> <li>- Feasibility studies, designs and EIAs prepared for the planned infrastructure and target watershed/drainage basins including</li> </ul>

	<p>topographical, hydrological, hydrogeological, geotechnical and surface water balance studies to support adaptation technology design and siting of infrastructure.(2.3.1)</p> <ul style="list-style-type: none"> <li>- Training on Operation and Maintenance for all zones for the three line ministries, Agriculture, Livestock and Water (2.3.2)</li> <li>- Rehabilitation of 2 grazing reserves, (150 km<sup>2</sup>) in Hargeisa District and Dulcad grazing reserve (800 km<sup>2</sup>) in Burao District (2.3.3)</li> <li>- Construction of 2 earthen dams along with distribution infrastructure (i.e., pumps, pipes, channels, etc.): 50,000 m<sup>3</sup> dam at Baligubadle in Hargeisa District and 50,000 m<sup>3</sup> dam at Heere village in Burao District (Somaliland) (2.3.4)</li> <li>- Flood control project at Geed Deble in Hargeisa District (500 m of flood control gabions at Hargeisa water sources in Geeddeeble) (Somaliland) (2.3.5)</li> <li>- Construction of 5 water diversion structures to control soil erosion and enhance livelihoods at 5 sites (Somaliland) (2.3.6)</li> <li>- Reforestation activities along 200 ha in appropriate areas within the Hawd plateau (Somaliland) (2.3.7)</li> <li>- Construction of two 50,000 m<sup>3</sup> dams along with distribution infrastructure (i.e. pipes, channels, etc.) (Puntland) (2.3.8)</li> <li>- Construction of 6 water diversion structures to control soil and gully erosion and enhance livelihoods (Puntland) (2.3.9)</li> <li>- Financial support and training for establishing 2 tree nurseries, reforestation in 25 sites of 10,000 trees each, 2 model farms and 2 livestock water points (Puntland) (2.3.10)</li> <li>- Reforestation activities along 200 ha, led by government authorities (Puntland) (2.3.11)</li> <li>- Rehabilitation of 4 canals, 2 in Afgoye and 2 in Jowhar (2.3.12)</li> <li>- Study on the feasibility, comparative costs and benefits and business potential of a range of small-scale adaptation technologies. The study will include a sex-disaggregated baseline analysis of the women business group's current incomes. (2.4.1)</li> <li>- Selection and design of a project focused on one of the identified adaptation technologies, including a value-chain analysis (2.4.2)</li> </ul>
N	- Distribution of agricultural inputs to participants of APFS (2.1.8)
O	<ul style="list-style-type: none"> <li>- Provision of small grants to 2 CBOs per district to implement small-scale, community-based EbA and NRM measures, such as soil bunds, small ponds, etc. (2.1.9)</li> <li>- Grants for 1 women group in each zone in setting up small businesses, business plans and in the technical aspects of the selected adaptation technology option (2.4.3)</li> </ul>
P	<ul style="list-style-type: none"> <li>- Community mobilization and a 6 month training on Natural Resource Management (NRM) and Integrated Water Management (IWM) through the establishment or revival of 3 Community Based Organizations (CBOs) per zone (9 total) (2.1.3)</li> <li>- Training and workshops to assist in the establishment of 16 Agro-Pastoral Field Schools, 2 APFS per District (2.1.5)</li> <li>- Training of 1 Master Trainer from NGOs, CBOs or government departments per zone for 4 months, possibly abroad in a neighbouring country (e.g., Uganda) and training for 1 facilitator per APFS for 1 month with technical support from FAO (2.1.6)</li> <li>- Meeting once every week for 3 months every year for each APFS (2.1.7)</li> <li>- Supporting DDMCs in developing training materials on DRM and early warnings for CBOs and implementing the training for all CBOs in their districts (2.2.3)</li> <li>- Training of 10 women groups in each zone in setting up small businesses, business plans and in the technical aspects of the selected adaptation technology option (2.4.3)</li> </ul>
Q	- Field validation support (transport, mobile phone, etc.)
R	- Support for the Project Implementation Team, including the Project Manager, a Finance/Admin expert, and a Knowledge Management / Monitoring and Evaluation expert
S	- Supplies for the Project Implementation Team (furniture, hardware, etc.)

**NATIONAL AND INTERNATIONAL<sup>61</sup> PERSONNEL REQUIRED**

<b>No.</b>	<b>Type of Expert</b>	<b>Role</b>	<b>Duration</b>	<b>Fee (USD)</b>
1	Somali origin or International	Public Administration Specialist	2 mo	27,950
2	National	Climate Change Specialist / Zonal Project Officer	4 yr	120,000
2	Somali origin or International	Climate Education Specialist	3 mo	41,925
3	Somali origin or International	Financing / Economics of Adaptation Expert	3 mo	41,925
5	Somali origin or International	Land-use Planning Expert	5 mo	69,875
6	National	Database Expert	3 mo	12,000
7	Somali origin or International	Disaster Risk Reduction Policy Advisor	3 mo	40,625
8	Somali origin or International	Disaster Reduction Management Expert	6 mo	83,850
9	National	Adaptation Plan Expert	1 yr	48,000
10	Somali origin or International	Forestry Expert	3 mo	41,925
11	Somali origin or International	Agronomist	3 mo	41,925
12	National	Local Forestry Expert	6 mo	24,000
13	Somali origin or International	Water Mobilisation Technical Expert	6 mo	81,250
14	Somali origin or International	EIA Consultant Team	3 mo	30,000
15	National	Gender expert	1 yr	48,000
<b>No.</b>	<b>PM</b>	<b>Project Management Role</b>	<b>Annual Salary (USD)</b>	<b>Project Total (USD)</b>
1	National	Project Manager **	260000	1,040,000
2	National	Admin / Finance	24000	96000
3	National	M&E and Knowledge Management Specialist	48000	192000

\*\* The salary is based on the standard pro forma for UNDP-Somalia which includes danger pay and other applicable entitlements for non-family duty stations. The position will be based in the UNDP Country Office in Mogadishu.

<sup>61</sup> Efforts will be made to engage qualified professionals of Somali origin in the proposed international expert positions.

## 5 MANAGEMENT ARRANGEMENTS

278. The execution modality for this project will be UNDP's Direct Implementation Modality (DIM), which is the principle implementation modality under the 2011-2015 Country Programme Document (CPD) (See Annex 9). The Implementing Partner (IP) for this project will be UNDP.

279. UNDP will be accountable for the disbursement of funds and the achievement of the project goals, according to the approved work plan. Working closely with the Government, the UNDP Country Office will be responsible for: (i) providing financial and audit services to the project, (ii) recruitment of project staff and contracting of consultants and service providers, (iii) overseeing financial expenditures against project budgets approved by the Project Steering Committee, (iv) appointment of independent financial auditors and evaluators; and (v) ensuring that all activities, including procurement and financial services, are carried out in strict compliance with UNDP-GEF/LDCF procedures. A UNDP staff member will be assigned with the responsibility for the day-to-day management and control over project finances (cost of which is not charged to the LDCF). The Direct Implementation Modality (DIM) is UNDP's standard working practice in Somalia. As a result, the UNDP Country Office places great emphasis on the importance of Mid-Term Reviews and Terminal Evaluations, and will ensure that they are thorough and completely independent. In the context of this specific UNDP-implemented, LDCF-financed project, the UNDP-GEF Staff (led by the Regional Technical Advisor) will provide an additional layer of oversight, and will participate in regular project team calls to monitor progress and oversee project implementation.

280. The Project Board will consist of UNDP and the Global Environment Facility Focal Point. Project Board meetings will be attended by the Government Focal Points in each zone. Members of the Project Board are likely to include the Ministry of Planning and International Cooperation, the Somalia Disaster Management Agency, the Ministry of Livestock, Forest and Rangeland, the Office and the Prime Minister, the Directorate of Wildlife and Tourism, the Ministry of Agriculture, the Ministry of Women and Human Rights Development, District Representatives and women and NGO representatives. Additional representatives will be invited to attend the Project Board meetings as required. Focal points in the Ministries at the level of Director (and on the payroll of the government) will be responsible for coordinating project implementation and oversight of activities.

281. LDCF funds will be used to pay the salaries for Project Implementation Team (PIT) which will consist of the Project Manager (recruited by UNDP), a Project Officer from each zone (3 in total), a Financial and Administrative Assistant and a Monitoring and Evaluation / Knowledge Management specialist. A Technical Advisory Committee consisting of Ministry and donor representatives will be formed to support the PIT.

282. On the regional level in each zone, three regional committees will be formed. The Regional Committees will be co-chaired by the Government Focal Points (who will also participate in the Project Board meetings) and the Project Manager. Relevant Government Representatives, District Officers and NGO/CBO Representatives will also be included as members of the Regional Committees.

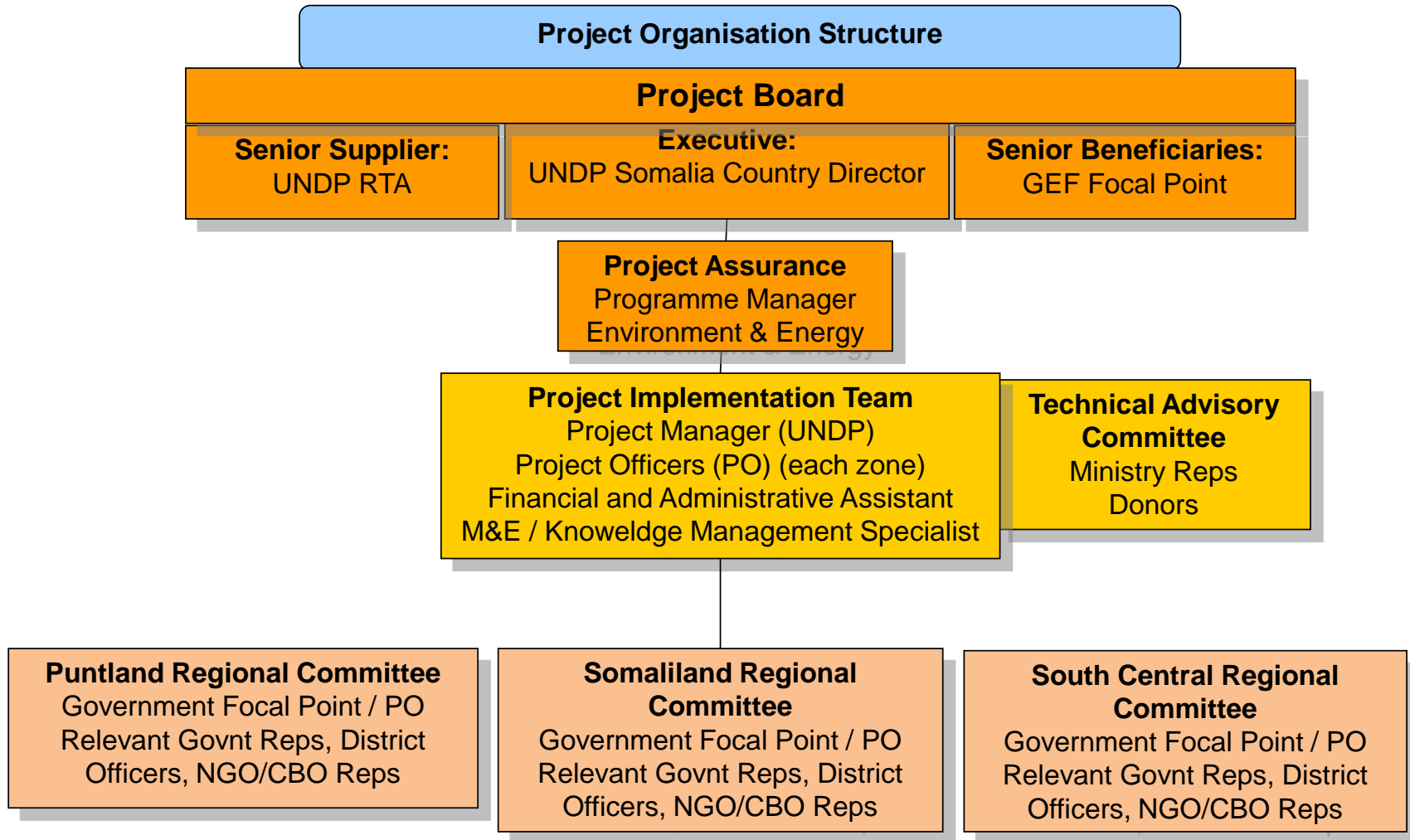
283. Various implementing entities (referred to as Responsible Parties) will be hired by UNDP. Only prequalified NGOs/CBOs will be provided Micro-Capital Grants (MCGs). Similarly, Letters of Agreement (LoA) will be established with the relevant Government ministries.

284. A Memorandum of Understanding and Terms of Reference (TOR) indicating the role of each executing agency will be developed under the guidance of the PIT during project implementation.

285. The Stakeholder Involvement Table, indicating the key inputs of all project partners during project implementation, was provided in Table 2.

286. A schematic detailing the Management Arrangements, including the responsible decentralized agencies and support committees/organizations, is presented below. The roles and responsibilities of the parties involved in managing and implementing the project are described below.

Figure 1: Management Arrangements



287. The Project Board contains four distinct roles which have been filled as follows:

- 1) **An Executive:** individual representing the project ownership to chair the group.
  - UNDP Somalia Country Office (CO)
- 2) **Senior Supplier:** group representing the interests of the parties concerned which provides funding for specific cost-sharing projects and/or technical expertise to the project. The Senior Supplier's primary function within the Project Steering Committee is to provide guidance regarding the technical feasibility of the project and alignment of the outcomes/outputs with the LDCF.
  - UNDP-GEF Regional Technical Advisor
- 3) **Senior Beneficiary:** group of individuals representing the interests of those who will ultimately benefit from the project. The Senior Beneficiary's primary function within the Project Steering Committee is to ensure the realization of project results from the perspective of project beneficiaries.
  - GEF Focal Point, Govt of Somalia
- 4) The **Project Assurance** role supports the Project Steering Committee Executive by carrying out objective and independent project oversight and monitoring functions in line with UNDP and GEF/LDCF policies and procedures.
  - Programme Manager for Environment and Energy at the UNDP Somalia CO and the UNDP-GEF team in the region and HQ.

288. **Project Manager:** The Project Manager has the authority to run the project on a day-to-day basis on behalf of the Implementing Partner within the constraints laid down by the PB. The Project Manager's prime responsibility is to ensure that the project produces the results specified in the project document, to the required standard of quality and within the specified constraints of time and cost. The PM is accountable to UNDP, the IP and the Project Board for the quality, timeliness and effectiveness of the activities carried out, as well as for the use of funds. He/she will also be responsible for coordinating budgets and work plans at the regional level with the Project Officers. The Project Manager will be assisted by a Technical Committee, 3 Project Officers (one from each zone), a Financial Advisor and an Administrative Assistant and a Monitoring and Evaluation / Knowledge Management Expert.



## 6 MONITORING FRAMEWORK AND EVALUATION

The project will be monitored through the following M&E activities. The M&E budget is provided in the table below. The M&E framework set out in the Project Results Framework in Part III of this project document is aligned with the AMAT and UNDP M&E frameworks.

**Project start:** A Project Inception Workshop will be held within the first 2 months of project start with those with assigned roles in the project organization structure, UNDP Country Office and, where appropriate/feasible, regional technical policy and programme advisors as well as other stakeholders. The Inception Workshop is crucial to building ownership for the project results and to plan the first year annual work plan.

The **Inception Workshop** should address a number of key issues, including:

- Assist all partners to fully understand and take ownership of the project. Detail the roles, support services and complementary responsibilities of UNDP CO and Regional Coordinating Unit (RCU) staff (i.e. UNDP-GEF Regional Technical Advisor) vis-à-vis the project team. Discuss the roles, functions, and responsibilities within the project's decision-making structures, including reporting and communication lines, and conflict resolution mechanisms. The Terms of Reference for project staff will be discussed again as needed.
- Based on the project results framework and the LDCF-related AMAT set out in the Project Results Framework in Section III of this project document, finalize the first annual work plan. Review and agree on the indicators, targets and their means of verification, and recheck assumptions and risks.
- Provide a detailed overview of reporting, monitoring and evaluation (M&E) requirements. The Monitoring and Evaluation work plan and budget should be agreed and scheduled.
- Discuss financial reporting procedures and obligations, and arrangements for annual audit.
- Plan and schedule Steering Committee meetings. Roles and responsibilities of all project organisation structures should be clarified and meetings planned. The first Steering Committee meeting should be held within the first 12 months following the inception workshop.

An **Inception Workshop report** is a key reference document and must be prepared and shared with participants to formalize various agreements and plans decided during the meeting.

**Baseline:** a baseline study will be conducted during the first year of project implementation to refine the M&E Framework, develop a strong Performance Measurement Framework, collect baseline data regarding selected indicators, and define roles and responsibilities in conducting monitoring activities throughout the lifespan of the project. This study will also lead to the development of a specific M&E Manual.

### **Quarterly:**

- Progress made shall be monitored in the UNDP Enhanced Results Based Management Platform.
- Based on the initial risk analysis submitted, the risk log shall be regularly updated in ATLAS.

Risks become critical when the impact and probability are high. Note that for UNDP/GEF projects, all financial risks associated with financial instruments such as revolving funds, micro-finance schemes or capitalization of ESCOs are automatically classified as critical on the basis of their innovative nature (high impact and uncertainty due to no previous experience justifies classification as critical).

- Based on the information recorded in Atlas, a Project Progress Reports (PPR) can be generated in the Executive Snapshot.
- Other ATLAS logs will be used to monitor issues, lessons learned. The use of these functions is a key indicator in the UNDP Executive Balanced Scorecard.

**Annually:** Annual Project Review/Project Implementation Report (APR/PIR): This key report is prepared to monitor progress made since project start and in particular for the previous reporting period (30 June to 1 July). The APR/PIR combines both UNDP and GEF reporting requirements.

The APR/PIR includes, but is not limited to, reporting on the following:

- Progress made toward project objective and project outcomes - each with indicators, baseline data and end-of-project targets (cumulative).
- Project outputs delivered per project outcome (annual).
- Lesson learned/good practice.
- AWP and other expenditure reports.
- Risk and adaptive management.
- ATLAS QPR.

**Periodic Monitoring** through site visits: UNDP CO and the UNDP-GEF region-based staff will conduct visits to project sites based on the agreed schedule in the project's Inception Report/Annual Work Plan to assess first hand project progress. Other members of the Project Steering Committee may also join these visits. A Field Visit Report/BTOR will be prepared by the CO and UNDP RCU and will be circulated no less than one month after the visit to the project team and Project Steering Committee members.

**Mid-term of project cycle:** The project will undergo an independent Mid-Term Review at the mid-point of project implementation (expected to be in November 2016). The Mid-Term Review will determine progress being made toward the achievement of outcomes and will identify course correction if needed. It will focus on the effectiveness, efficiency and timeliness of project implementation; will highlight issues requiring decisions and actions; and will present initial lessons learned about project design, implementation and management. Findings of this review will be incorporated as recommendations for enhanced implementation during the final half of the project's term. The organization, terms of reference and timing of the mid-term review will be decided after consultation between the parties to the project document. The Terms of Reference for this Mid-Term Review will be prepared by the UNDP CO based on guidance from the Regional Coordinating Unit (RCU) and UNDP-GEF. The LDFC/SCCF AMAT as set out in the Project Results Framework in Section III of this project document will also be completed during the mid-term evaluation cycle.

**End of Project:** An independent Terminal Evaluation will take place three months prior to the final PB meeting and will be undertaken in accordance with UNDP-GEF guidance. The terminal evaluation will focus on the delivery of the project's results as initially planned (and as corrected after the mid-term review, if any such correction took place). The terminal evaluation will look at impact and sustainability of results, including the contribution to capacity development and the achievement of global environmental benefits/goals. The Terms of Reference for this evaluation will be prepared by the UNDP CO based on guidance from the Regional Coordinating Unit and UNDP-GEF. The LDFC/SCCF AMAT as set out in the Project Results Framework in Section III of this project document will also be completed during the terminal evaluation cycle. The Terminal Evaluation should also provide recommendations for follow-up activities and requires a management response, which should be uploaded to PIMS and to the UNDP Evaluation Office Evaluation Resource Centre (ERC).

**Learning and knowledge sharing:** Results from the project will be disseminated within and beyond the project intervention zone through existing information sharing networks and forums.

The project will identify and participate, as relevant and appropriate, in scientific, policy-based and/or any other networks, which may be of benefit to project implementation though lessons learned. The project will identify, analyse, and share lessons learned that might be beneficial in the design and implementation of similar future projects.

There will be a two-way flow of information between this project and other projects of a similar focus.

**Communications and visibility requirements:**

Full compliance is required with UNDP's Branding Guidelines. These can be accessed at <http://intra.undp.org/coa/branding.shtml>, and specific guidelines on UNDP logo use can be accessed at: <http://intra.undp.org/branding/useOfLogo.html>. Amongst other things, these guidelines describe when and how the UNDP logo needs to be used, as well as how the logos of donors to UNDP projects needs to be used. For the avoidance of any doubt, when logo use is required, the UNDP logo needs to be used alongside the GEF logo. The GEF logo can be accessed at: [http://www.thegef.org/gef/GEF\\_logo](http://www.thegef.org/gef/GEF_logo). The UNDP logo can be accessed at <http://intra.undp.org/coa/branding.shtml>.

Full compliance is also required with the GEF's Communication and Visibility Guidelines (the "GEF Guidelines"). The GEF Guidelines can be accessed at: [http://www.thegef.org/gef/sites/thegef.org/files/documents/C.40.08\\_Branding\\_the\\_GEF%20final\\_0.pdf](http://www.thegef.org/gef/sites/thegef.org/files/documents/C.40.08_Branding_the_GEF%20final_0.pdf).

Amongst other things, the GEF Guidelines describe when and how the GEF logo needs to be used in project publications, vehicles, supplies and other project equipment. The GEF Guidelines also describe other GEF promotional requirements regarding press releases, press conferences, press visits, visits by Government officials, productions and other promotional items.

Where other agencies and project partners have provided support through co-financing, their branding policies and requirements should be similarly applied.

Table 9: Project Monitoring and Evaluation Work Plan and Budget

Type of M&E activity	Responsible Parties	Budget US\$ <i>Excluding project team staff time</i>	Time frame
Inception Workshop and Report	<ul style="list-style-type: none"> <li>• UNDP Programme Manager</li> <li>• PIT (Project Implementation Team)</li> <li>• UNDP CO, UNDP GEF</li> </ul>	Indicative cost: 20,000	Within first two months of project start-up.
Baseline analysis	<ul style="list-style-type: none"> <li>▪ Verification of sex-disaggregated baseline values for the indicators in the Results Framework</li> </ul>	Indicative cost: 30,000	Within first three months of project start-up.
Measurement of Means of Verification of project results.	<ul style="list-style-type: none"> <li>▪ UNDP GEF RTA/UNDP CO will oversee the hiring of specific studies and institutions, and delegate responsibilities to relevant team members.</li> <li>▪ PIT, esp. M&amp;E expert</li> </ul>	To be finalized in Inception Phase and Workshop.  Indicative cost is 30,000	Start, mid and end of project (during evaluation cycle) and annually when required.
Measurement of Means of Verification for Project Progress on output and implementation	<ul style="list-style-type: none"> <li>• Oversight by UNDP Programme Manager</li> <li>▪ PIT, esp. M&amp;E/KM expert</li> <li>▪ Implementation teams</li> </ul>	To be determined as part of the Annual Work Plan's preparation.  Indicative cost is 40,000	Annually prior to ARR/PIR and to the definition of annual work plans.
ARR/PIR	<ul style="list-style-type: none"> <li>▪ UNDP Programme Manager</li> <li>▪ PIT</li> <li>▪ UNDP CO</li> <li>▪ UNDP RTA</li> </ul>	None	Annually
Periodic status/ progress reports	<ul style="list-style-type: none"> <li>▪ UNDP Programme Manager and team</li> </ul>	None	Quarterly
Mid-Term Review	<ul style="list-style-type: none"> <li>▪ UNDP Programme Manager</li> <li>▪ PIT</li> <li>▪ UNDP CO</li> <li>▪ UNDP RTA</li> <li>▪ External Consultants (i.e. evaluation team)</li> </ul>	Indicative cost: 40,000	At the mid-point of project implementation.
Terminal Evaluation	<ul style="list-style-type: none"> <li>▪ UNDP Programme Manager</li> <li>▪ PIT</li> <li>▪ UNDP CO</li> <li>▪ UNDP RTA</li> <li>▪ External Consultants (i.e. evaluation team)</li> </ul>	Indicative cost : 40,000	At least three months before the end of project implementation.
Audit	<ul style="list-style-type: none"> <li>▪ UNDP CO</li> <li>▪ UNDP Programme Manager</li> <li>▪ PIU</li> </ul>	Indicative cost per year: 5,000 (20,000 total)	Annually
Visits to field sites	<ul style="list-style-type: none"> <li>▪ UNDP CO</li> <li>▪ UNDP RTA(as appropriate)</li> <li>▪ Government representatives</li> </ul>	For GEF-supported projects, paid from IA fees and operational budget.  Additional fees of 40,000 included due to security	Annually for UNDP CO.

<b>Type of M&amp;E activity</b>	<b>Responsible Parties</b>	<b>Budget US\$</b> <i>Excluding project team staff time</i>	<b>Time frame</b>
		and special charter flight costs	
<b>TOTAL indicative COST</b> Excluding project team staff time and UNDP staff and travel expenses		US\$ 260,000 (+/- 5%)	

## 7 LEGAL CONTEXT

This document together with the CPAP signed by the Government and UNDP which is incorporated by reference constitute together a Project Document as referred to in the SBAA and all CPAP provisions apply to this document.

Consistent with the Article III of the Standard Basic Assistance Agreement, the responsibility for the safety and security of the implementing partner and its personnel and property, and of UNDP's property in the implementing partner's custody, rests with the implementing partner.

The implementing partner shall:

- a) put in place an appropriate security plan and maintain the security plan, taking into account the security situation in the country where the project is being carried;
- b) assume all risks and liabilities related to the implementing partner's security, and the full implementation of the security plan.

UNDP reserves the right to verify whether such a plan is in place, and to suggest modifications to the plan when necessary. Failure to maintain and implement an appropriate security plan as required hereunder shall be deemed a breach of this agreement.

The implementing partner agrees to undertake all reasonable efforts to ensure that none of the UNDP funds received pursuant to the Project Document are used to provide support to individuals or entities associated with terrorism and that the recipients of any amounts provided by UNDP hereunder do not appear on the list maintained by the Security Council Committee established pursuant to resolution 1267 (1999). The list can be accessed via <http://www.un.org/Docs/sc/committees/1267/1267ListEng.htm>. This provision must be included in all sub-contracts or sub-agreements entered into under this Project Document.

Audit: This project will be audited in accordance with UNDP Financial Regulations and Rules and applicable audit policies.

## 8 ANNEXES

### Annex 1: Risk Analysis

This table is for UNDP project implementation and evaluations. It is based on the risks identified in Section 2.5.

#	Description of the risk	Potential consequence	Countermeasures / Management response	Type (Risk category) Environmental Financial Operational Organizational Political Regulatory Strategic Other	Probability & Impact (1-5, low to high)	Owner	Submitted updated by	Last Update	Status
1	A low level of cooperation between executing institutions due to political divisions and the existence of distinct zones of Federal Somalia, Puntland and Somaliland makes the coordination of policy development challenging.	Project Implementation Unit could be hindered in decision-making due to lack of inter-zone collaboration.	Management arrangements include one clear focal point for implementation, the Ministry of Environment and Petroleum which also houses the GEF operational focal point. Each zone will have a Project Officer who will be in charge of activity implementation on a day to day basis. Programme outcomes will be maximized by having three clear Regional Committees (led by the zonal Project Officer) which will include relevant government representatives, district officers and NGO/CBO representatives for each zone. The Regional Committees will be responsible for implementing the zone's adaptation priorities. To unify climate change responses and	Operational, Political	P=3 I=4				



#	Description of the risk	Potential consequence	Countermeasures / Management response	Type (Risk category) Environmental Financial Operational Organizational Political Regulatory Strategic Other	Probability & Impact (1-5, low to high)	Owner	Submitted updated by	Last Update	Status
			<p>facilitate fund mobilization for adaptation for Somalia, one federal Climate Change policy will be generated. In contrast, since land-use varies from one zone to the next based on the different climate zones present in Somalia and the different prevailing livelihoods, each zone will develop its own land use policy. This will avoid any inter-zone conflict and will target the adaptation needs in each zone. Similarly, Climate Monitoring / Early Warning System centres will be developed in each zone due to the varying capacities for disaster preparedness in each zone (DRM capacities are strongest in Somaliland and weakest in South Central).</p> <p>As evidenced by the New Deal Compact, the recent efforts of the international community to build consensus among the zones and reunify Somalia are positive. It is expected that positive progress will be</p>						

#	Description of the risk	Potential consequence	Countermeasures / Management response	Type (Risk category) Environmental Financial Operational Organizational Political Regulatory Strategic Other	Probability & Impact (1-5, low to high)	Owner	Submitted updated by	Last Update	Status
			made in this direction and political environment will become conducive for implementing the LDCF financed project. UNDP Somalia furthermore has excellent relationships with all the key partners and will play an active role in facilitating coordination.						
2	Security risks could affect project implementation, particularly clan-based conflicts over competing uses of natural resources.	Project activity implementation could be delayed or plans will need to be altered to find secure locations for project interventions.	The target areas within the eight districts have been chosen based on the criteria of having a stable security situation. To ensure security, the project will work through local NGOs/CBOs, who have experience in project implementation, for project delivery. The security situation in the selected districts will be monitored closely and if necessary, project activities will be shifted to more secure areas or districts.  Similar to the NAPA and LDCF preparation, project implementation will ensure that customary dispute resolution mechanisms are used to resolve any conflicts. For instance,	Operational	P = 4 I = 4				

#	Description of the risk	Potential consequence	Countermeasures / Management response	Type (Risk category) Environmental Financial Operational Organizational Political Regulatory Strategic Other	Probability & Impact (1-5, low to high)	Owner	Submitted updated by	Last Update	Status
			<p>traditional elders, religious leaders and clan leaders will continue to be consulted on any major implementation decisions for ground-based activities. Project implementation will also ensure an inclusive, participatory approach involving all key stakeholders including women and youth and an equitable distribution of benefits.</p> <p>The recognition of the new federal government by the EU and USA and supportive resolution of the UN Security Council to strengthen the national institutions is already having positive impacts for peace building in Somalia. LDCF funds will further support security by empowering the youth. Funds will be used to provide technical knowledge on climate change adaptation to current and prospective students (e.g., incorporating climate modules into existing degree programmes and offering scholarships for university degrees with climate</p>						

#	Description of the risk	Potential consequence	Countermeasures / Management response	Type (Risk category) Environmental Financial Operational Organizational Political Regulatory Strategic Other	Probability & Impact (1-5, low to high)	Owner	Submitted updated by	Last Update	Status
			modules). Also the security situation will be improved by creating clear, publicized land used policies and by improving the ecosystem services which support agriculture and pastoral livelihoods (e.g., through water mobilization and reforestation).						
3	Limited climate monitoring inhibits forecasting capabilities and the ability to develop detailed spatial mapping to allow for adequate adaptation and risk reduction planning.	Flood and drought mitigation strategies are rendered ineffective due to poor planning based on inaccurate and/or missing weather and climate monitoring data / forecasts.	Since national forecasting capacities are absent in Somalia, regional forecasting products generated by FEWSNET, ICPAC and FAO SWALIM will be exploited by the Climate Monitoring /Early Warning System (CM/EWS) centres / focal points to be developed / supported in the proposed project. (The regional forecasts make use of the limited monitoring network in Somalia as well as data from neighbouring countries in the region and/or satellite images.) Such forecasts will be appropriate for the climate risk management approaches to be employed with LDCF funds that will not be highly	Operational	P = 3 I = 3				

#	Description of the risk	Potential consequence	Countermeasures / Management response	Type (Risk category) Environmental Financial Operational Organizational Political Regulatory Strategic Other	Probability & Impact (1-5, low to high)	Owner	Submitted by	Last Update	Status
			<p>dependent upon precise climate change scenarios. Rather, LDCF funds will focus on building the capacities of the CM/EWS centres in Somaliland and Puntland and the CM/EWS focal points in South Central to use the existing products for disaster risk reduction planning in the context of uncertainty. Funds will also support ministries and districts to generate development plans and adaptation decisions in the face of uncertainty. In such a manner, the proposed project will focus on building the capacities of the ministries/institutions to deliver adaptation and risk reduction planning with existing data. This is seen to be more critical than expanding the monitoring network when the CM/EWS and relevant ministries will not yet have the required human resources and technical expertise to maintain additional stations. Similarly, for early warning development, the</p>						

#	Description of the risk	Potential consequence	Countermeasures / Management response	Type (Risk category) Environmental Financial Operational Organizational Political Regulatory Strategic Other	Probability & Impact (1-5, low to high)	Owner	Submitted updated by	Last Update	Status
			project will support enhanced communication of existing forecasts and the development of district level Disaster Management Committees (DDMCs) so as to focus on the delivery of risk information to the communities.						
4	Lack of nationally-available expertise and human resources and sustainability may be at risk if trained individuals leave government ministries/institutions for more lucrative private, international or non-governmental positions.	Project implementation is delayed to recruit new technically qualified personnel. Also, initial technical studies on water and groundwater resource mobilisation can be delayed.	Universities will be supported to introduce climate modules into existing degree programmes so that students can be trained in the most up-to-date relevant climate change adaptation practices relative to their respective discipline (e.g., water and soil conservation methods for agricultural studies, optimal water mobilization infrastructure for civil engineering studies, etc). Students will be incentivized to follow fields where there is a climate change emphasis because LDCF funds will be used to offer scholarships in each relevant discipline. This approach will generate technically-savvy graduates	Operational	P = 2 I = 2				

#	Description of the risk	Potential consequence	Countermeasures / Management response	Type (Risk category) Environmental Financial Operational Organizational Political Regulatory Strategic Other	Probability & Impact (1-5, low to high)	Owner	Submitted by	Last Update	Status
			<p>who will then provide the required technical expertise to the understaffed ministries.</p> <p>The issue of the unavailability of requisite human resources will also be mitigated by recruitment of international experts (with preference given to those of Somali origin) who will work closely with in-country counterparts and will provide targeted capacity building activities (e.g., sustainable forestry, agronomy, water mobilization) in Component 1.</p> <p>Furthermore, an international fund mobilization expert will be engaged to ensure that the ministries have the necessary budget lines to keep the staff base or to enhance the technical expertise required if there are weaknesses in particular areas.</p>						
5	Water and natural resource management	Recurring drought can hinder	The project will take into account region-specific current climatic variability in the selection of the	Operational	P = 4 I = 4				



#	Description of the risk	Potential consequence	Countermeasures / Management response	Type (Risk category) Environmental Financial Operational Organizational Political Regulatory Strategic Other	Probability & Impact (1-5, low to high)	Owner	Submitted updated by	Last Update	Status
	strategies are made ineffective by an unanticipated increase in the frequency of flood events and continued drought which jeopardizes agricultural and pastoral production	sustainable crop production for agro-pastoralists and flash floods can damage the water points and cultivated areas near the wadis.	adaptation technologies. For instance earth dams will be placed in regions where significant water must be mobilized. Water diversions will be placed in areas to mitigate flood risks for downstream farmers/pastoralists. Water storage will be provided in the event that additional drought events occur. Project beneficiaries will also gain training in resiliency-building approaches such as soil and water conservation methods. The choice of adaptation technologies to be implemented will be contextualized based on the targeted needs (e.g., women, youth) so that all members of the rural populations can build resilience to climate shocks. Furthermore, the project will support women to have sustainable businesses in promoting adaptation technologies so as to diversify their livelihoods and provide them access to capital.						

#	Description of the risk	Potential consequence	Countermeasures / Management response	Type (Risk category) Environmental Financial Operational Organizational Political Regulatory Strategic Other	Probability & Impact (1-5, low to high)	Owner	Submitted updated by	Last Update	Status
6	Targeted farmers and pastoralists are sceptical and unwilling to use adaptation technologies / practices so as to diversify their livelihoods and/or income diversification strategies do not significantly increase household incomes.	Without sufficient awareness and training, agro-pastoralists may be reluctant to try seemingly more complicated technologies and livelihood practices which can build their resilience to climate change.	In Component 2, LDCF funds will be used to provide field demonstration sites in the form of the Farmer and Pastoral Field Schools. These sites will provide extensive training on the appropriate adaptation technologies for the target areas. LDCF funds will then be used to provide small grants to the farmers and pastoralists so that they can use the adaptation technologies in their respective farms/grazing lands to improve their productivity.  Funds will also be used to support women to promote adaptation technologies. The idea is to promote women-based groups to have sustainable businesses focused on the sale of adaptation technologies. Such an approach will build on the entrepreneurial spirit of Somali women, use existing women-based groups and provide women with alternate livelihoods and sources of	Operational, Strategic	P = 3 I = 3				

#	Description of the risk	Potential consequence	Countermeasures / Management response	Type (Risk category) Environmental Financial Operational Organizational Political Regulatory Strategic Other	Probability & Impact (1-5, low to high)	Owner	Submitted updated by	Last Update	Status
			income.						
7	Water ministries have limited capacity to design, construct and perform maintenance on water mobilization infrastructure	Threat to the sustainability of water supplies and waste of financial resources.	With large physical infrastructure planned in Component 2, a Chief Technical Advisor (CTA) and water mobilization expert will be recruited to assist the Ministries of Water with proper design and construction of water mobilization infrastructure in each zone. The CTA and expert will be tasked in training the Water ministries on proper Operation and Maintenance (O&M). The CTA will provide O&M assistance throughout the entire project.	Operational, Financial	P = 2 I = 3				
8	There is insufficient technical and operational capacity within the regional governments to coordinate drought and flood preparedness and to implement unfamiliar Ecosystem-based	Project interventions are delayed to allow for longer than expected recruitment processes.	In Component 1, LDCF funds will be used to provide significant training for the ministries on climate change adaptation. A Climate Change expert will be seconded to each zone's Environment Ministry for the entire duration of the project. The expert will be tasked with familiarizing the ministries on Ecosystem-based Adaptation actions and how they	Operational, Strategic	P = 3 I = 3				

#	Description of the risk	Potential consequence	Countermeasures / Management response	Type (Risk category) Environmental Financial Operational Organizational Political Regulatory Strategic Other	Probability & Impact (1-5, low to high)	Owner	Submitted updated by	Last Update	Status
	Adaptation actions		contribute to supporting the livelihoods of pastoralists and farmers. Similarly, a Disaster Risk Management expert will be recruited to support the CM / EWS centres to be developed in the proposed project. The DRM expert will be tasked with reinforcing the drought and flood preparedness of the CM/EWS centres. The centres will be responsible for building the capacity of the District Disaster Management Committees (DDMCs) to be formed in the proposed project. The DDMCs will be trained to develop targeted disaster preparedness plans based on their district's vulnerabilities.						
9	The lack of politically recognized Environmental Impact Assessment procedures causes unforeseen adverse social/environmental	Upstream and downstream populations might be affected by poorly designed water	During project preparation, an Environmental and Social Screening Procedure was used to identify any potential social/environmental risks and their required mitigation measures. The mitigation measures have been integrated into the project	Environmental, Operational	P=3, I=3				

#	Description of the risk	Potential consequence	Countermeasures / Management response	Type (Risk category) Environmental Financial Operational Organizational Political Regulatory Strategic Other	Probability & Impact (1-5, low to high)	Owner	Submitted updated by	Last Update	Status
	impacts	mobilisation and diversion strategies.	design. As only Somaliland has a formalized EIA procedure which is not as rigorous as international approaches, an international EIA team (preferably with experts of Somali origin) will be recruited to conduct an internationally-recognized EIA assessment procedure during the first 6 months of the project. With such an approach, particularly with the physical infrastructure to be built in the all zones, this will avoid any hazards such as potential downstream impacts.						

**Annex 2: Work Plan**

<b>Annual repartition of activities</b>				
	<b>Yr-1</b>	<b>Yr-2</b>	<b>Yr-3</b>	<b>Yr-4</b>
<b>COMPONENT 1</b>				
1.1.1 Training and workshops to build capacity in managing climate adaptation projects for 20 60 government officials for each zone (60 participants total30 Federal Somalia, 15 Puntland and 15 Somalia, 30% women)	<b>64,000</b>			
1.1.2 Training materials developed and workshops conducted on the basic principles of climate change and gender-sensitive adaptation for mainstreaming climate change into sectoral policies and climate risk screening tools. Three training workshops will be conducted for 150 participants (in each region, including70 Federal Somalia, 40 Puntland, 40 Somaliland, 30% women)	<b>125,000</b>	<b>90,000</b>	<b>90,000</b>	<b>90,000</b>
1.1.3 Climate Module with sub-modules developed and offered by the University of Hargeisa, Puntland State University and one University in South Central, to be decided after a brief assessment		<b>57,000</b>		
1.1.4 Nine national students per zone, (5 from Federal Somalia, 2 Puntland and 2 Somaliland, including 1 woman from each zone), supported to attend environment/natural resource management higher degree programs and have CC mainstreamed into their programmes of study. A scholarship requirement for all recipients will be that they work within Somalia for the first 2 years after graduating	<b>27,000</b>	<b>27,000</b>	<b>27,000</b>	<b>27,000</b>
1.2.1 Detailed sectoral analysis of climate vulnerabilities and the socioeconomic and gendered impacts of climate change on each sector will be prepared for water, agriculture, livestock and energy sectors in coordination with the IGAD ICPAC	<b>12,000</b>	<b>42,000</b>	<b>12,000</b>	<b>12,000</b>

<b>Annual repartition of activities</b>				
	<b>Yr-1</b>	<b>Yr-2</b>	<b>Yr-3</b>	<b>Yr-4</b>
1.2.2 Each ministry integrates climate change, placing emphasis on the gender aspects of impacts and adaptation measures, into existing sectoral policies, plans, laws and regulatory frameworks and ensures appropriate representation of the sectors				<b>5,000</b>
1.2.3 The Planning Ministries are supported to carry out a study to identify a mix of financing sources to mobilize funds for Climate Change Adaptation		<b>42,000</b>		
1.3.1 A National Climate Change Policy is developed, taking into account the sectoral vulnerabilities, impacts and costs for adaptation (Federal Somalia)		<b>20,000</b>	<b>20,000</b>	
1.3.2 Representation of Somalia in international and regional climate negotiations, conferences and events that promote South-South cooperation. 9 relevant and LDCF trained government officials (5 from Federal Somalia, 2 from Puntland and 2 from Somaliland, at least one woman per zone) will be supported to attend, participate and represent Somalia's interests in climate discussions and negotiations.		<b>13,500</b>		
1.3.3 Establishment of Land Policy Development Teams within the Land Planning Units of the Ministries of Planning.	<b>125,000</b>	<b>125,000</b>	<b>90,000</b>	<b>90,000</b>
1.3.4 Development of Land-Use Policies in each zone that are based on principles of integrated land and water management and integrate climate change concerns			<b>45,000</b>	
1.3.5 Technical surveys carried out, in collaboration with SWALIM, to establish an updated baseline for land-use reports for each zone	<b>9,000</b>			
1.3.6 Development of a database and information management system	<b>32,000</b>	<b>20,000</b>		



<b>Annual repartition of activities</b>				
	<b>Yr-1</b>	<b>Yr-2</b>	<b>Yr-3</b>	<b>Yr-4</b>
1.4.1 Preparation of a National Disaster Management Policy, with clear roles and responsibilities defined and a comprehensive survey of the capacity needs for managing disaster risks. A DRR Policy Advisor will be hired for 3 months and placed at the MoPMR and will work with SDMA and line ministers for the development of the policy (South Central)	<b>41,000</b>			
1.4.2 Development of a comprehensive Program Document/Capacity Needs Assessment for the DRM sector in Puntland. This will include systematic analysis of gaps in capacity in technical, financial and HR capacity and will be multi-sectoral in nature. (Puntland)	<b>5,000</b>			
1.4.3 Establishment of Climate Monitoring and Early Warning Systems Center in NERAD/HADMA (Somaliland and Puntland) Appointment of ministry focal points to disseminate relevant warnings. (South Central)	<b>132,000</b>	<b>132,000</b>	<b>90,000</b>	<b>90,000</b>
1.4.4: Training for the CM/EWS centers and the SMDA staff. The role of the CM/EWS centers and SDMA will be to carry out Disaster Risk Reduction and early warning dissemination including testing of the EWS and message dissemination systems.	<b>20,000</b>	<b>20,000</b>	<b>20,000</b>	<b>20,000</b>
1.4.5: Provision of warning communication equipment for CM/EWS centres in NERAD/HADMA and for the CM/EWS focal points within SDMA in South Central		<b>11,500</b>		
1.5.0 Knowledge Management and Monitoring and Evaluation (spread over all Outputs)	<b>25,000</b>	<b>25,000</b>	<b>25,000</b>	<b>25,000</b>
<b>Subtotal Component 1</b>	<b>617,000</b>	<b>625,000</b>	<b>419,000</b>	<b>359,000</b>

<b>Annual repartition of activities</b>				
	<b>Yr-1</b>	<b>Yr-2</b>	<b>Yr-3</b>	<b>Yr-4</b>
<b>COMPONENT 2</b>				
2.1.1: Development of Arid and Semi-Arid (ASAL) Zone Adaptation Plans for Somaliland and Puntland for Burao and Hargaysa districts (Somaliland) and Dangaroyo and Bandarbayla districts (Puntland) based and a Shabelle Basin Adaptation Plan for South Central based				<b>84,000</b>
2.1.2: Research and documentation on the most relevant international best practices on the cultivation and uses of drought-resilient seeds and plants for food, fodder and forestry carried out to support EbA and NRM plan implementation			<b>84,000</b>	
2.1.3 Community mobilization and a 6 month training on Natural Resource Management (NRM), Integrated Water Management (IWM) and basic project management and budget monitoring through the establishment or revival of 9 Community Based Organizations (CBOs) (5 in South Central, 2 in Puntland and 2 in Somaliland) where LDCF1 projects are being implemented.	<b>200,000</b>			
2.1.4 Mass awareness campaign with distinct strategies for local communities/NGOs/CSOs to disseminate information on existing policies and regulations	<b>45,000</b>	<b>45,000</b>		
2.1.5 Establishment of 16 Agro-Pastoral Field Schools, 2 APFS per District	<b>160,000</b>	<b>160,000</b>		
2.1.6 Training of 1 Master Trainer from NGOs, CBOs or government departments per zone for 4 months, possibly abroad in a neighboring country (e.g., Uganda) and training for 1 facilitator per APFS for 1 month with technical support from FAO	<b>38,000</b>			
2.1.7 Meeting once every week for 3 months every year for each APFS	<b>5,000</b>	<b>5,000</b>	<b>5,000</b>	<b>5,000</b>

<b>Annual repartition of activities</b>				
	<b>Yr-1</b>	<b>Yr-2</b>	<b>Yr-3</b>	<b>Yr-4</b>
2.1.8 Distribution of agricultural inputs to participants of APFS	<b>32,000</b>	<b>32,000</b>	<b>32,000</b>	<b>32,000</b>
2.1.9 Provision of small grants to 2 CBOs per district to implement small-scale, community-based EbA and NRM measures, such as soil bunds, small ponds, etc.			<b>240,000</b>	<b>240,000</b>
2.2.1: Establishment of volunteer community-based district Disaster Management Committees (DDMC) in Burao, Hargeisa Districts (Somaliland), Dangoroyo and Bandar Bayla Districts (Puntland) and Balanbale, Guriel, Jowhard and Afgooye districts (South Central) by a designated NGO	<b>23,000</b>			
2.2.2 Development of community-based DRM Plans to address identified Climate Change (CC) and natural risks with CC projections and scenarios considered		<b>16,000</b>	<b>16,000</b>	
2.2.3 Supporting DDMCs in developing training materials on DRM and early warnings for CBOs and implementing the training for all CBOs in their districts	<b>24,000</b>	<b>24,000</b>		
2.2.4 Supporting the DDMCs/CBOs in establishing a resilience fund with proper transparency and accountability mechanisms to be used to finance operation and maintenance costs for community-based infrastructure and disaster preparedness measures (to be co-financed by contributions and district budgets)				<b>16,000</b>
2.3.1 Feasibility studies, design documents and EIAs prepared for the planned infrastructure and target watershed/drainage basins including topographical, hydrological, hydrogeological, geotechnical and surface water balance studies to support adaptation technology design and siting of infrastructure.	<b>175,000</b>			
2.3.2: Training on Operation and Maintenance for all three zones for the three line ministries, Agriculture, Livestock and Water	<b>200,000</b>			

<b>Annual repartition of activities</b>				
	<b>Yr-1</b>	<b>Yr-2</b>	<b>Yr-3</b>	<b>Yr-4</b>
2.3.3: Rehabilitation of 2 grazing reserves, (150 km2) in Hargeisa District and Dulcad grazing reserve (800 km2) in Burao District. (Somaliland)	<b>150,000</b>			
2.3.4: Construction of 2 earthen dams along with distribution infrastructure (i.e., pumps, pipes, channels, etc.): 50,000 m3 dam at Baligubadle in Hargeisa District and 50,000 m3 dam at Heere village in Burao District (Somaliland)	<b>150,000</b>	<b>150,000</b>		
2.3.5: Flood control project at Geed Deble in Hargeisa District (500 m of flood control gabions at Hargeisa water sources in Geeddeeble) (Somaliland)		<b>90,000</b>	<b>90,000</b>	
2.3.6: Construction of 5 water diversion structures to control soil erosion and enhance livelihoods at 5 sites (Somaliland)	<b>20,000</b>	<b>60,000</b>	<b>60,000</b>	<b>60,000</b>
2.3.7: Reforestation activities along 200 ha in appropriate areas within the Hawd plateau (Somaliland)	<b>35,000</b>	<b>35,000</b>	<b>35,000</b>	<b>35,000</b>
2.3.8 Construction of two 50,000 m3 dams along with distribution infrastructure (i.e. pipes, channels, etc.) (Puntland)		<b>150,000</b>	<b>150,000</b>	
2.3.9: Construction of 6 water diversion structures to control soil and gully erosion and enhance livelihoods (Puntland)	<b>20,000</b>	<b>50,000</b>	<b>50,000</b>	<b>60,000</b>
2.3.10: Financial support and training for establishing 2 tree nurseries, reforestation in 25 sites of 10,000 trees each, 2 model farms and 2 livestock water points (Puntland)		<b>34,000</b>	<b>34,000</b>	<b>34,000</b>
2.3.11: Reforestation activities along 200 ha, led by government authorities (Puntland)	<b>35,000</b>	<b>35,000</b>	<b>35,000</b>	<b>35,000</b>
2.3.12: Rehabilitation of 4 canals, 2 in Afgoye and 2 in Jowhar. Estimated size various from 0.5KM to 4KM (South Central)	<b>45,000</b>	<b>45,000</b>	<b>45,000</b>	<b>35,000</b>
2.3.13: Rehabilitation / Construction of dams in all 4 target districts (South Central)		<b>250,000</b>	<b>250,000</b>	

<b>Annual repartition of activities</b>				
	<b>Yr-1</b>	<b>Yr-2</b>	<b>Yr-3</b>	<b>Yr-4</b>
2.3.14:Rehabilitation of 2 boreholes in Balanbale and 2 in Guriel (South Central)	<b>80,000</b>	<b>80,000</b>	<b>80,000</b>	<b>80,000</b>
2.3.15:Construction of 8 new water diversion/flood routing structures, 2 in each district (South Central)	<b>80,000</b>	<b>80,000</b>	<b>80,000</b>	<b>80,000</b>
2.3.16:Financial support and training for establishing tree nurseries, fodder production, farms and livestock watering points near the water sites (South Central)		<b>35,000</b>	<b>35,000</b>	<b>35,000</b>
2.3.17:Reforestation along 200 ha in appropriate areas within the target drainage basin, particularly around the newly constructed water infrastructure and in severely degraded areas (South Central)	<b>35,000</b>	<b>35,000</b>	<b>35,000</b>	<b>35,000</b>
2.4.1: Study on the feasibility, comparative costs and benefits and business potential of a range of small-scale adaptation technologies. The study will include a baseline analysis of the women business group's current incomes.	<b>30,000</b>			
2.4.2 Selection and design of a project focused on one of the identified adaptation technologies, including a value-chain analyses	<b>15,000</b>			
2.4.3 Training of 10 women groups in each zone in setting up small businesses, business plans and in the technical aspects of the selected adaptation technology option	<b>20,000</b>	<b>20,000</b>	<b>20,000</b>	
2.4.4 Provision of micro-grants on a cost-share basis to support 10 women entrepreneur groups/cooperatives per zone to start up their adaptation technology business. The women's cooperatives will match 20-25% of the grant funding to ensure ownership and sustainability of the businesses		<b>20,000</b>	<b>20,000</b>	<b>20,000</b>
2.5.1 Visibility including signage at infrastructure sites to promote awareness of interventions			<b>50,000</b>	<b>50,000</b>
2.5.2 Knowledge Management and Monitoring and Evaluation	<b>40,000</b>	<b>40,000</b>	<b>40,000</b>	<b>40,000</b>

<b>Annual repartition of activities</b>				
	<b>Yr-1</b>	<b>Yr-2</b>	<b>Yr-3</b>	<b>Yr-4</b>
<b>Subtotal Component 2</b>	<b>1,657,000</b>	<b>1,491,000</b>	<b>1,486,000</b>	<b>976,000</b>
<b>Annual TOTALs</b>	<b>2,274,000</b>	<b>2,116,000</b>	<b>1,905,000</b>	<b>1,335,000</b>

## Annex 3: Cofinancing Letters



EUROPEAN UNION  
DELEGATION TO THE REPUBLIC OF KENYA  
SOMALIA MISSION

Ref. Ares(2014)1204930 - 16/04/2014

HEAD OF COOPERATION

Ms. Adriana Dinu  
UNDP-GEF Officer-in-charge  
304 East 45th St., 9<sup>th</sup> Floor,  
New York, NY, 10017 USA

**Subject: Co-ordination between EU MDG-Initiative and UNDP-GEF LDCF project  
“Enhancing Climate Resilience of the Vulnerable Communities and  
Ecosystems in Somalia”**

Dear Ms. Dinu,

On behalf of the European Union, I am pleased to express my full endorsement and support of the Global Environment Facility (GEF) project on **Enhancing Climate Resilience of the Vulnerable Communities and Ecosystems in Somalia** financed by the Least Developed Country Fund (LDCF). The project is fully in-line with the EU's *MDG initiative for Somalia - Reducing hunger and food insecurity in Puntland region through improved and sustainable use of rangeland resources*. The *MDG initiative* supports Millennium Development Goals (MDG) 1 (food security and water infrastructure development) and 7 (managing rangelands). Specifically, the *MDG initiative* has similar objectives as the LDCF project in the Puntland area and will provide full support in the following aspects:

- Combating rangeland degradation and improving the sustainable use of rangeland resources;
- Providing employment to rural populations by i) reviving rangeland-based livelihoods, ii) creating jobs linked to environmental monitoring and protection and iii) providing Cash for Work opportunities;
- Empowering communities to manage small funds for projects to mitigate drought or to improve their livelihood with a Community Driven Development (CDD) scheme;
- Strengthening institutional, policy and legal frameworks for rangeland protection.

A strong collaboration between the EU and UNDP will enable the LDCF project to build off the lessons learned from the *MDG initiative* which has already begun implementation. To demonstrate its support for the LDCF project, the EU has already committed a Euro 25m grant contribution in-parallel towards the LDCF project for Outcome 1 (Enhancing Policies, Institutional Frameworks and Government Capacities) and Outcome 2 (Piloting Ecosystem Based Adaptation Strategies).

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Tel: (+254-020) 2712830 Telefax: (+254-020) 2710997  
E-mail: [somaliamission@eeas.europa.eu](mailto:somaliamission@eeas.europa.eu)  
Website: <http://www.eu-somalia.eu>



As for the MDG project, the Joint Research Centre (JRC) of the European Commission can also be involved for monitoring and technical information about climate and natural resources in Somalia.

We thank you for your support and look forward to a fruitful collaboration in the future.

Yours Sincerely,

A handwritten signature in black ink, appearing to be 'Daria Fane', written in a cursive style.

Cc. George Conway  
Country Director, UNDP-Somalia



*Empowered lives.  
Resilient nations.*

**Note to File**

The purpose of this note to file is to confirm the exchange rate from Euro to USD that was applied to convert co-financing commitment from the European Union of Euro 25.0 million towards UNDP/LDCF project on “Enhancing Climate Resilience of the Vulnerable Communities and Eco-systems in Somalia”. The co-financing letter is attached to this note to file.

The exchange rate used for the conversion is based on 2014 mid-year (30 June 2014) operational exchange rate published by the **United Nations Treasury** for Euro to USD. The UN operation exchange rate on 30 June 2014 was 0.736 Euro to 1 USD. The total co-financing of Euro 25.0 million is thus worked out as USD 34 million.

**Prepared by:**

Digitally signed by  
abdul.qadir@undp  
.org  
Date: 2014.09.02  
14:47:17 +03'00'

**Abdul Qadir Rafiq**  
**Project Manager**  
**Environment and Energy**  
**UNDP-Somalia**

**UNDP Somalia Country Office** – UN Common Compound, Airport Road, Mogadishu, Somalia  
[registry\\_so@undp.org](mailto:registry_so@undp.org) UNDP Somalia Nairobi Support Office – UNON, UN Avenue, Block D5, PO Box  
28832, Nairobi, Kenya | +254 20 51 21324

Jamhuuriyadda Federaalka Soomaaliya  
Wasaaradda Batroolka & Macdanta  
Xafiiska Agaasimaha Guud



جمهورية الصومال الفيدرالية  
وزارة البترول والثروة المعدنية  
مكتب المدير العام

Federal Republic of Somalia  
Ministry of Petroleum & Mineral resources  
Office of the Director General

REF/00078/2014

Date:08/07/2014

TO: Ms. Adriana Dinu  
UNDP-GEF Officer-in-charge  
304 East 45th St., 9<sup>th</sup> Floor, New York, NY, 10017 USA

Subject: Co-financing for the UNDP-GEF LDCF project "Enhancing Climate Resilience of the Vulnerable Communities and Ecosystems in Somalia"

Dear Ms Adriana

This letter confirms the commitment of the Ministry of Petroleum, Minerals and Environment to act as the Federal Focal Point for implementation of the Global Environment Facility (GEF) project on **Enhancing Climate Resilience of the Vulnerable Communities and Ecosystems in Somalia (2013 – 2017)** financed by the Least Developed Country Fund (LDCF).

To demonstrate its support for the LDCF financed project, the Ministry is committing the equivalent of USD 8 million in-kind for office space, staff contribution, transport and logistics support over the implementation period of the project. The cofinancing will contribute to Outcome 1 (Enhancing Policies, Institutional Frameworks and Government Capacities) and Outcome 2 (Piloting Ecosystem Based Adaptation Strategies)

We look forward to assisting with successful project implementation and thank you for your support.

Dr. Farah Abdi Hassan  
Director General  
Ministry of Petroleum & Mineral Resources / Environmet



Wasaaradda Macdanta & Batroolka,  
Tel: +25261 5522 003

وزارة البترول والثروة المعدنية  
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*Empowered lives.  
Resilient nations.*

29 August 2014

Dear Ms. Adriana Dinu,

**Subject: Co-financing for the UNDP-GEF LDCF project “Enhancing Climate Resilience of the Vulnerable Communities and Ecosystems in Somalia”**

On behalf of UNDP Somalia office, I am pleased to express my full endorsement and support of the Global Environment Facility (GEF) project on Enhancing Climate Resilience of the Vulnerable Communities and Ecosystems in Somalia (2014 – 2017) financed by the Least Developed Country Climate Fund (LDCF).

The project is fully in-line with the UN's Joint Programme for Sustainable Charcoal Production and Alternative Livelihoods (PROSCAL) (2013 – 2016). Specifically, the PROSCAL initiative has similar objectives as the LDCF project and will provide full support in the following aspects:

- Strengthening Natural Resource Management;
- Facilitating more resilient and sustainable livelihoods;
- Reforesting and rehabilitating degraded ecosystems for environmental conservation.

**Ms. Adriana Dinu**  
**UNDP-GEF Officer-in-charge**  
**304 East 45th St., 9th Floor, New York, NY, 10017 USA**

**UNDP Somalia Country Office** – UN Common Compound, Airport Road, Mogadishu, Somalia [registry.so@undp.org](mailto:registry.so@undp.org)  
**UNDP Somalia Nairobi Support Office** – UNON, UN Avenue, Block D5, PO Box 28832, Nairobi, Kenya | +254 20 51 21324

To demonstrate its support for the LDCF financed project, the PROSCAL programme is planning parallel grant co-financing equal to USD 12.32 million towards Outcome 1 (Enhancing Policies, Institutional Frameworks and Government Capacities) and Outcome 2 (Piloting Ecosystem Based Adaptation Strategies) of the LDCF-financed project. Funds for PROSCAL Programme are being mobilised jointly by UNDP, UNEP and FAO from the multi/bi-lateral donors supporting the implementation of Somali New Deal Compact.

UNDP's Poverty Reduction and Environment Protection Programme (PREP) (2013-2015) is also aligned with the LDCF financed project through the following relevant activities: (1) stabilization of livelihoods (e.g., using cash for work schemes), and (2) Local Economic Development (LED) projects which reinforce environmental management at the local level, promote environmental recovery of degraded land and support water resources management.

To demonstrate its support for the LDCF financed project, the PREP programme will be committing a USD 1.5 million contribution towards Outcome 1 and Outcome 2 from UNDP's core resources over a period of four years. In addition, UNDP is also planning USD 9.0 million co-financing for on-the-ground water management, improved agriculture and access to markets in Component 2 through the LED projects planned under PREP. The additional funding of USD 9.0 million for LED is part of the resources to be mobilized from the donors during the implementation timeframe of LDCF project.

The co-financing estimates for LED follow the trend in funding committed by the donors on an annual basis during recent years. As UNDP will be the Implementing Entity for the LDCF financed project, lessons learned from both the PREP and PROSCAL programmes will be streamlined into project implementation.

We thank you for your support and look forward to a fruitful collaboration in the future.

Yours sincerely,



George Conway  
Country Director

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Conway  
DN: cn=George Conway,  
o=UNDP, ou=UNDP Somalia,  
email=george.conway@und  
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## **Annex 4: Terms of Reference**

### **A. Project Board**

The Project Board is responsible for making management decisions for a project in particular when guidance is required by the Project Manager. The Project Board plays a critical role in project monitoring and evaluations by quality assuring these processes and products, and using evaluations for performance improvement, accountability and learning. It ensures that required resources are committed and arbitrates on any conflicts within the project or negotiates a solution to any problems with external bodies. In addition, it approves the appointment and responsibilities of the Project Manager and any delegation of its Project Assurance responsibilities. Based on the approved Annual Work Plan, the Project Board can also consider and approve the quarterly plans (if applicable) and also approve any essential deviations from the original plans.

The Project Board (PB) shall comprise national and sub-national representatives to guide and oversee the project. Focal points in the Ministries at the level of Director (and on the payroll of the government) will be responsible for coordinating project implementation and oversight of activities.

The PB will be housed within the UNDP Somalia Country Office and chaired by the GEF FP. Members of the Project Board are likely to include the Ministry of Planning and International Cooperation, the Somalia Disaster Management Agency, the Ministry of Livestock, Forest and Rangeland, the Office and the Prime Minister, the Directorate of Wildlife and Tourism, the Ministry of Agriculture, the Ministry of Women and Human Rights Development, District Representatives and women and NGO representatives. The PB will convene annually to discuss project progress and approve annual work plans. The UNDP Programme Officer will be an ex officio member of PB responsible for taking minutes. Potential members of the Project Board are reviewed and recommended for approval during the PAC meeting. Representatives of other stakeholders can be included in the Board as appropriate.

The responsibilities of the PB will be to:

- Supervise and approve the annual work plans and short term expert requirements
- Supervise project activities through monitoring progress and approving annual reports
- Review and approve work plans, financial plans and reports
- Provide strategic advice to the implementing institutions to ensure the integration of project activities with national and sub-national sustainable development and climate resilience objectives.
- Ensure inter agency coordination and cross-sectorial dissemination of strategic findings
- Ensure full participation of stakeholders in project activities
- Assist with organization of project reviews and contracting consultancies under technical assistance
- Provide guidance to the Project Manager.

### **B. Project Manager**

The Project Manager has the authority to run the project on a day-to-day basis on behalf of the Implementing Partner within the constraints laid down by the PB. The Project Manager's prime responsibility is to ensure that the project produces the results specified in the project document, to the required standard of quality and within the specified constraints of time and cost. The PM is accountable to UNDP, the IP and the Project Board for the quality, timeliness and effectiveness of the activities carried out, as well as for the use of funds. He/she will also be responsible for coordinating budgets and work plans at the regional level with the Project Officers. The Project Manager will be



assisted by a Technical Committee, 3 Project Officers (one from each zone), a Financial Advisor and an Administrative Assistant and a Monitoring and Evaluation / Knowledge Management Expert.

#### Responsibilities

- Ensuring effective partnership working between the sub-national implementing Bureaus and the participating national agencies.
- Managing human and financial resources in consultation with the UNDP Programme Officer to achieve results in line with the outputs and activities outlined in the project document.
- Preparing detailed annual breakdowns of the work plan for all project objectives and preparation of quarterly work plans.
- Preparing quarterly status and financial reports for comments by the UNDP Programme Officer.
- Leading the preparation and implementation of annual results-based work plans and logical frameworks as endorsed by the management.
- Liaison with related and parallel activities dealing with adaptation, early warning, MF/MI and with cooperating implementing Ministries and Bureaus.
- Monitoring project activities, including financial matters, and preparing monthly and quarterly progress reports, and organising monthly and quarterly progress reviews.
- Supporting the UNDP Programme Officer to organise task team meetings and annual lesson learning conferences
- Coordinating the distribution of responsibilities amongst team members and organising the monitoring and tracking systems.
- Reporting and providing feedback on project strategies, activities, progress, and barriers to PB.
- Organising annual task team meetings to share knowledge and experiences and lesson learned.
- Facilitating Project Board meetings and documenting meeting minutes.

**C. Zonal Project Officer (ZPO) (Note: the Zonal Project Officers will also share the role of being the National CC Specialists)**

UNDP (Puntland, Somaliland and South Central) will appoint a Project Officer who will be responsible for the overall administration, on behalf of their respective zone, for the project. He/she will also support the PM with oversight, coordination of activities and maintaining a liaison with UNDP. The Zonal Project Officer's salary will be provided by project funds.

The Project Officers will be responsible for the following in their respective zone:

- Oversight and coordination of implementation of project activities.
- Assist in recruitment and supervision of technical and training expertise as required for implementation of the project.
- Developing and maintaining close linkages with relevant sectorial government agencies, UNDP, NGOs, civil society, international organisations and implementing partners of the project.
- Coordinating the establishment of its respective Regional Committee.
- Coordinating its respective Regional Committee in carrying out their duties at an optimum level through ensuring efficient and effective resource utilization.
- Coordinating inputs into annual results-based work plans and logical frameworks as endorsed by the management.

- Coordinating inputs into all project reports as required (including Annual Project Reports, Inception Report, Quarterly Reports and the Terminal Report).
- Formalizing any NGO/CBO contractual agreements

#### **D. Financial and Administrative Assistant**

One Financial and Administrative assistant will report to PM and will be contracted by the UNDP Somalia CO. His/her responsibilities will be to:

- Set up and maintain project files and accounting systems whilst ensuring compatibility with Somali and UNDP financial accounting procedures.
- Prepare budget revisions of the project budgets and assist in the preparation of the annual work plans.
- Process payments requests for settlement purposes including quarterly advances to the implementing partners upon joint review.
- Update financial plans, prepare status reports, progress reports and other financial reports.
- Undertake project financial closure formalities including submission of terminal reports, transfer and disposal of equipment, processing of semi-final revisions, and support professional staff in preparing the terminal assessment reports.
- Assist in the timely issuance of contracts and assurance of other eligible entitlements of the project personnel, experts, and consultants by preparing annual recruitment plans.
- Collect and maintain project related information data and establish document control procedures.
- Administer Project Board meetings.
- Administer project revision control.
- Compile, copy and distribute all project reports.
- Provide support in the use of Atlas for monitoring and reporting.

#### **E. Monitoring and Evaluation (M&E) / Knowledge Management (KM) Expert (National)**

The M&E/KM Expert will report to the PM and will support the UNDP, ZPOs and the Regional Committees to prepare the relevant M&E/KM systems required to monitor and assess quality of progress, to identify, collect, analyse, document and disseminate lessons learned through an annual project meeting, and support the preparation of project evidence for sharing (e.g., UNDP ALM). The M&E/KM Expert will prepare the data collection protocols to consistently collect data on project progress from project sites and its processing by the PM for national reporting purposes with assistance from the ZPOs.

##### **Responsibilities**

- Establish the overall results-based M&E/KM strategy in accordance with M&E/KM plans outlined in the project document.
- Design a system for collecting information on project lessons to be used in annual progress meetings.
- Develop data collection instruments, cognisant of the spatial data requirements advised by the Technical Advisory Committee
- Guide and coordinate the review of the project Strategic Results Framework, including:
  - a. Provide technical advice for the revision of performance indicators.



- b. Identify sources of data, collection methods, who collects data, how often, cost of collection and who analyses the data.
- c. Facilitate annual review of risks by PM.
- Prepare reporting formats and support PM to prepare the required reports. Guide project task teams in preparing their progress reports in accordance with the approved reporting formats. This includes quarterly progress reports, annual project reports, inception reports, and ad-hoc technical reports.
- Foster participatory planning and monitoring by advising the training institutions on content for participatory monitoring and evaluation of activities.
- Assist the PM to collate technical reports and other documents from the project and contribute to the ALM.

#### Qualifications Required

- Capacities in knowledge management and reporting
- Proven capacity in M&E/KM for the UN system (ALM, UNDP Evaluation Resource Centre)
- Knowledge of climate change adaptation is an asset

#### **F. Technical Advisory Committee**

A Technical Advisory Committee consisting of Ministry and donor representatives will be formed to support the Project Implementation Team (PIT). They will be responsible for providing support on collaboration with other ministry and donor activities. They will discuss how to share resources when applicable and how to plan work timelines so that human resources are available.

#### **G. Public Administration Specialist (International<sup>62</sup> 2 mo)**

A Public Administration Specialist will be responsible for reinforcing the capacities of MPME, SDMA, MoSPIC, Ministry of Agriculture and the Ministry of Water and Energy (South Central), the MoEWT, HADMA and the Planning and International Cooperation (Puntland), the Ministry of Planning, Environment and Rural Development and NERAD (Somaliland) in addition to the Ministry of Women's Affairs in all zones (approximately 60 government officials) on public administration topics such as project planning, management and monitoring, performance monitoring systems, budget processes and accountability mechanisms. He/she will be responsible for developing a capacity building plan including holding workshops, on-the-job training, development of project management tools and HR policies related to Climate Change Adaptation. The objective of the Public Administration Specialist will be to make the relevant ministries autonomous so that they can lead the planning, implementation and monitoring of CCA projects in the next phases of LDCF and for future development projects having a climate-related focus.

#### **H. Climate Change Specialist (3 National for 4 year project duration) (Note: the National CC Specialists will also share the role of being the Zonal Project Officers)**

Climate affects almost all human endeavours. Its inherent variability, including extreme meteorological events (such as floods and droughts), also affects the land and water systems on which society depends for survival. A national Climate Change Specialist will be responsible for developing training materials and conducting workshops for relevant government institutions on Climate Change. The Specialist must combine a broad background in the social sciences with detailed knowledge of

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<sup>62</sup> Efforts will be made to engage qualified professionals of Somali origin in the proposed international expert positions.

the physical sciences, theory from the research community, and model-generated and monitored environmental data to answer specific institutional questions across various sectors (Agriculture, Livestock, Water, Finance, etc). The Specialist will train the relevant officials in the use and treatment of climate observation data and the development of climate risk and vulnerability scenarios. They will be positioned within the environment ministries in each zone at the MPME, MoEWT and MERD in South-Central, Puntland and Somaliland respectively. They will be responsible for mainstreaming climate change into sectoral policies and climate risk screening tools. Also, they will assist in the preparation of Somalia's first National Climate Change Policy.

Responsibilities of the Climate Change Specialist shall include:

- Developing training materials, conducting workshops and preparing and disseminating materials such as briefing notes, fact sheets, presentations, guidelines for mainstreaming climate change into sectoral policies and climate risk screening tools.
- Reviewing quality and utility of existing data and outlining data requirements and analytical frameworks for risk and vulnerability analyses.
- Oversight of observational and measurement techniques to maintain the integrity and representativeness of short- and long-term databases to permit an accurate and unbiased evaluation of climate change.
- Preparing climate data specifications and a data collection protocol.
- Studying the climatic trends of each zone in Somalia and preparing climate projection overlays.
- Assisting in the preparation of future climate scenarios and their evaluation for planning purposes, including climate impact assessments and trade-off analyses.
- Support with the development of a National Climate Change Policy which will be used to streamline coordination of Climate Change / Disaster Risk Management related programmes/policies and to integrate cross-sectoral vulnerabilities, impacts and costs for adaptation.
- Ensure the NCC Policy includes information on investment, financial flow, cost-benefit and adaptation economic analysis of different medium- to long-term adaptation options to assess the burden of climate change on the public budget by conducting a Climate Public Expenditure and Institutional Review (CPEIR).
- Prepare knowledge-exchange experiences (South-south co-operations) indicating which climate risk and vulnerability training opportunities should be exploited, both regionally and internationally. The CC Specialist will also be responsible for ensuring Somalia is represented in international and regional climate negotiations, conferences and events by government officials from each zone.
- Assist the Project Implementation Team (PIT) (acting as a Zonal Project Officer, See above) to draft climate resilient plans based on options analysis, and lessons from pilot implementation
- Help relevant authorities to commit to develop new innovative information mechanisms that promote climate change education and awareness
- Participate in and present materials where appropriate at stakeholder workshops and Project Board meetings
- Working with high level government engagements on matters relating to climate change policy and legislation.

### **I. Climate Education Specialist (International, 3 mo)**

An International Specialist with experience in Ecosystem-based Adaptation and Integrated Water Management will be hired to develop climate sub-modules to be integrated into existing degree

programmes (environment, natural resources, public planning and administration, agriculture, etc) at universities in all zones. All existing curricula touch upon environmental issues without going into climate change. As such, the Climate Education Specialist will be responsible for training University lead faculty members on the basics of climate change, integrated land and water management principles, and international best practices on climate adaptation as related to specific sectors. The faculty members will subsequently be responsible for teaching the materials and creating a pool of university graduates with relevant technical expertise to serve the understaffed ministries.

Specific responsibilities for the Climate Education Specialist shall include

- Conduct an initial study to begin measuring and segregating the levels of knowledge of Climate Change within Somalia and the type of adaptation practices in use
- Design modules enhance the knowledge and capacity of young academics and future professionals to address climate change impacts across different disciplines.
- Develop sessions on the impacts of increasing temperature on crop growth, spread of climate-sensitive diseases, etc;
- Support linkages with an international University to broaden exchange and to build sustainability mechanisms into the climate modules.
- Guide Climate Change education and awareness programmes to publicize scholarships available and open government positions by collaborating with universities and media programmes

Expertise Required:

- PhD holder majorly in a field
- Have a minimum of a doctorate in an environment discipline stressing Climate Change and Natural Resource Management;
- An experience in developing climate change education and awareness programmes;
- Excellent oral and written communication in English is required;
- Have sound knowledge in climate change impacts and appropriate adaptation methods across sectors;
- Have competence in working with universities and professors;
- Knowledge on Arid and Semi-Arid Lands (ASALs)

## **J. Financial Expert, Specialized in Fund Mobilization (International, 2 mo)**

An international Financial Expert specialized in fund mobilization will analyse potential financing opportunities for Somalia with an emphasis on identifying public and private climate funds which can support further adaptation activity implementation and scaling-up in Somalia.

In this regard, his/her tasks shall include:

- Participate in the definition and implementation of a document of resource mobilization strategy ;
- Participate in the drawing of a resource mobilization plan ;
- Identify potential public and private partners towards whom the fund raising activities will be geared, with a particular emphasis on Ecosystem-based Adaptation;
- Participate in the development of programmes that fosters the mobilization of the international financial community.
- Carry out economic and sectoral studies in the sectors of water and environment

- Determine the costs and benefits relating to the financing of work projects using the economics of adaptation concept

Expertise Required:

- Have a minimum of Master's Degree (Master of Science, Master of Business Administration in project management, fund mobilization);
- An experience in the financing of climate adaptation, with a relevant experience in the formulation and implementation of programmes and projects on natural resource management would be an advantage;
- Excellent oral and written communication in English is required;
- Have sound knowledge in fund mobilization ;
- Have competence in dialogue and negotiation ;
- Have good skills in the use of financial management software;

**J. Environmental Economist (International, 1 mo. position could be combined with Finance Expert above for a total of 3 mo.)**

The Economist shall analyse and evaluate the economic impact of climate change, mitigation and adaptation on the agro-pastoral sector in Somalia at the macro and the sectoral level. At the macro level, the task will be to develop suitable economic models to analyse climate change impacts on the economy, for example, GDP, employment, investments, prices, etc. These models should be able to analyse the impact of various scenarios of climate change. Analysis using integrated assessment models is also envisaged especially with regards to long term assessment. At the sectoral level, the economic analysis, including econometrics, shall examine the impacts of climate change on the Livestock and Agricultural sectors of the economy as well as analyse various options to mitigate their impact on the climate. Cost and benefit analyses will be used to rank and prioritise the identified adaptation options.

Expertise Required:

The consultant should have the following expertise and experience:-

- An academic (Master degree or equivalent) and professional background in Environmental Economics or a related discipline;
- At least 10 years of relevant working experience;
- Expertise and experience in economic modelling, especially environmental I-O, CGE, GTAP-E, PAGE, etc;
- Expertise and experience in econometric or regression analysis;
- Relevant scientific; technical and economic experience to perform different scenario projections and analyses, with particular emphasis on sea level rise projections;
- Excellent communication skills; both oral and written, in English.
- Experience in technical report writing and presentation; and
- Prior experience in climate change research, either through involvement in the National Communication for UNFCCC process or similar, is an advantage.

**K. Land-use Planning Expert (International 5 mo.)**

The Land-use Planning Expert will be tasked with the development of Land Use Policies for each zone. One of the underlying causes for vulnerability in Somalia is the lack of management of natural resources and ecosystem services, which stems from poor land-use policies. Land degradation resulting from soil erosion, deterioration of physical and chemical properties of the soil, long-term loss of natural vegetation and conversion of forest to non-forest areas pose major threats to pastoralist

and agro-pastoralist livelihoods. The present vulnerability will be exacerbated by temperature rise,<sup>63</sup> increased flooding and droughts and other climate impacts. The lack of institutional policies to deal with resource based challenges further exposes communities to climate change.

In this context, his/her tasks shall include:

- developing an integrated policy which considers land and water resources as well as the various livelihood strategies that depend on the use of land, water and forestry resources.
- working with a range of stakeholders in its design and implementation.
- developing a broad consultative design process for the policy, including community mobilization and participation during the policy formulation stage,
- strategizing how to integrate the land-use policy into existing legal and regulatory frameworks, and clear roles and responsibilities.
- review and finalize forest cover and land use assessment methodologies and land use category classification in collaboration with the Ministries on the Environment, Agriculture and Livestock

Expertise Required:

The consultant should have the following expertise and experience:-

- An academic (Master degree or equivalent) and professional background in land-use, reforestation;
- An advanced degree in forestry or natural resource management
- At least 10 years of experience in forest management or related areas; and experience of land/forest cover monitoring at a country level
- Experience in Arid and Semi-arid Lands (ASALs)
- Fluency in English is required.

#### **L. Database Expert (National 3 mo)**

A national Database Expert will be hired to develop a database and information management system to inventory land-use patterns and activities. He/she will be responsible for IT equipment provision and training of the Ministries of Planning to maintain the database. The Expert must have experience with setting-up spatial databases and developing the indicators required by the regional planners to plan adaptive measures.

In this context, his/her tasks shall include:

- Identify and compile lists of equipment, software programs and remote sensing imagery data necessary and spatial data (GIS) to support database development;
- Develop a database and information management system in terms of design and analysis;
- Assist to build the capacities of GIS database experts to maintain the system;
  - Customize the database in terms of design, preparation/treatment of data for transport and import, and in mapping the spatial data;
  - Assist in the programming of an adaptive databank which will be updated as land-use data becomes available;
  - Work with planners to develop the indicators used to plan adaptive measures
  - Facilitate data sharing across relevant agencies/organization (e.g., with IGAD and FAO).
  - Ensure the database can document lessons learned on how to reduce natural resource conflicts on the basis on sound land tenure decisions.

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<sup>63</sup> Hartmann. I., Sugulle A., Awale, A., Nov 2009. The Impact of Climate Change on Pastoral Studies of Somaliland. Candlelight Report on the Environment.

#### Expertise Required:

- An academic (Master degree or equivalent) and professional background in database information management;
- Knowledge of Arid and Semi-arid Lands (ASALs) and land-use planning;
- At least 10 years of relevant working experience with planning agencies;

#### **M. Disaster Risk Reduction Policy Advisor (International 3 mo)**

The Disaster Risk Reduction Policy Adviser will support the development of a National Disaster Risk Reduction Policy. The Policy must define capacity needs for managing disaster risks. In developing the policy, he/she will build on knowledge gained from a broad spectrum of research on how to better inter-link programming that promotes the resilience of vulnerable communities. He/she must have/gain a deep understanding on how poor regulations on forest protection have led to heavy losses of topsoil and thereby increased erosion and siltation of canals and riverbeds in Somalia. He/she must integrate results from sectoral studies to provide the basis for the policy. The policy must provide guidance on effective community and organisational disaster risk reduction and preparedness strategies and activities. S/he will be placed at the MoPMR and will work with line ministries on the development of the national policy.

In this context, his/her duties and responsibilities shall include:

- Development of a comprehensive Program Document/Capacity Needs Assessment for the DRM sector in Puntland. This will include systematic analysis of gaps in capacity in technical, financial and HR capacity and will be multi-sectoral in nature.
- Promoting and developing integrated resilience programming;
- Working with HADMA/NERAD/SDMA on integrating appropriate DRR/DRM measures into the policy based on their experience, including community-based preparedness measures;
- Evidence of high level government engagement on matters relating to Disaster Risk Reduction / Management policy and legislation;

#### **N. Disaster Reduction Management Expert (International 6 mo)**

A Disaster Risk Management (DRM) Specialist will be recruited to provide workshops and training materials on topics such as hazard assessment tools, vulnerability mapping methodologies, disseminating climate information, and climate-proofing of infrastructure and investments. He/she will focus on strengthening DRR capacities in the line ministries of Water and Energy, Agriculture, and Livestock. Also, he/she will be responsible for disaster preparedness and mitigation training to address man-made hazards that exacerbate climate hazards. In Somaliland and Puntland, the disaster authorities of NERAD and HADMA require direct capacity support to implement the actions highlighted within their DRR frameworks through technical advisors. In Federal Somalia, capacity needs are greater and require that the expert train SDMA and focal points within the ministries.

He/she will also be tasked with establishing Climate Monitoring and Early Warning Systems Centres (CM/EWS) at HADMA and at NERAD to produce early warning products and communicate them to stakeholders in a timely manner. The CM/EWS will act as centralized unit where information can be brought together to determine a multi-hazard risk assessment, looking at economic impacts. The DRM specialist will be based at SDMA.

In this context, his/her duties and responsibilities shall include:



- Support and strengthen the technical and organisational capacities of HADMA/NERAD/SDMA and focal points within the relevant ministries of Federal Somalia to enable them to deliver effective and relevant disaster preparedness and risk reduction interventions
- Establishing Climate Monitoring / Early Warning System centres at HADMA and NERAD.
- Working with HADMA/NERAD/SDMA to support the issuing of early warning alerts and declarations of states of emergency.
- Supporting the DRR/DRM agencies and focal points to decentralize DRR/DRM and to create district Disaster Management Committees (DDMC).
- Assisting the district DDMCs in developing DRM plans.
- Testing early warning systems and message dissemination systems.
- Linking with regional early warnings.
- Working with colleagues in the Disaster Management Departments to integrate, disaster risk reduction and promote resilience
- Assisting in the development of and facilitate the application of quality assurance tools (impact monitoring, baselines etc.) and processes for disaster preparedness and risk reduction programmes.
- Contributing to the development of tools on key disaster preparedness, risk reduction and resilience issues.
- Linking between the scientific community, traditional knowledge and at-risk communities how to strengthen DRM needs.
- Working with scientists to allow the development of detailed risk profiles, for example flood risk maps.
- Conducting lessons learnt exercises and disaster response reviews on a systematic basis.
- Increasing awareness around disaster preparedness, risk reduction and resilience issues
- Supporting the development of training materials in disaster preparedness and risk reduction and facilitate the implementation of training / capacity building activities.
- Collecting, analysing and disseminating lessons learnt in disaster preparedness and risk reduction programming.
- Strengthening networking on disaster preparedness, risk reduction and resilience within Somalia and with relevant international technical actors and scientific forums.
- Working with private telephone operators and Communications Divisions to look into the potential of sending early warnings by SMS.
- Making presentations as required for learning, fundraising and training purposes to staff, volunteers, delegates and external organisations, including the media.

Expertise Required:

- An academic (Master degree or equivalent) and professional background in disaster risk management with knowledge on hydro-meteorology;
- At least 10 years of relevant working experience with DRM agencies;

**O. Adaptation Planning Expert (National 1 yr)**

The Adaptation Planning Expert will support the development of Arid and Semi-Arid (ASAL) Zone Adaptation Plans for Somaliland and Puntland and a Shabelle Basin Adaptation Plan for South Central based on 1) results from technical studies, 2) government and community consultations for adaptation planning and 3) climate vulnerability analysis (exposure, sensitivity and adaptive capacity) and an inventory of ecosystem functions. They will also be expected to support training on Natural Resource Management (NRM) and Integrated Water Management (IWM) through the establishment or revival of 3 Community Based Organizations.

Expertise Required:



- At least 5 years of relevant experience in working to address climate change;
- Knowledge of Arid and Semi-arid Lands (ASALs) and Ecosystem-based Adaptation;
- Experience in Integrated Watershed planning;
- Ability to conduct climate vulnerability analyses

**P. Forestry Expert (International 3 mo, National 6 mo)**

The International and National Forestry Experts will be recruited to manage the reforestation activities along 200 ha in each zone. They will also be responsible for training on establishing tree nurseries. He/she should have a strong background in forestry and remote sensing, forest assessment design and planning at the country level. S/he must be competent in forest information system development and information management and have confirmed experience in capacity building and project implementation. S/he should have familiarity with the requirements of global forest resources assessments and other international processes to ensure harmonization of the information needs at the national and international level.

To ensure good design, he/she will first be responsible for reviewing the existing forestry policy and legislation, documented lessons and best practice of sustainable forestry in Somalia and internationally. This review should be complemented by in-depth consultations with the Forestry Department and other Government Ministries as well as Traditional Authorities, forest dependent communities and other stakeholders (donors, NGOs etc).

Based on the review, the reforestation expert will:

- a) Determine site locations for reforestation with socio-economic justifications
- b) Propose of a broad co-management model between government and communities so that reforestation activities are sustained.
- c) Benchmark current practices against internationally recognized certification Principles and Criteria, identifying key constraints for sustainable wood supply in the region and probable social and environmental consequences if a supply-demand imbalance is confirmed
- d) Support training on Natural Resource Management (NRM) and Integrated Water Management (IWM) through the establishment or revival of 3 Community Based Organizations
- e) Prepare detailed Forestry Management Plans for the zones

He/she will also be responsible in working with the Land Use Policy experts to ensure that proper reforestation measures and techniques are integrated into the policies for each zone.

An advanced degree in forestry or natural resource management with at least 10 years of experience in forest management or related areas; and experience of land/forest cover monitoring at country level in a primarily tropical country will be preferred. Fluency in English is required.

**Qualifications Required**

- At least 10 years' experience of community forestry (co-management) in developing countries (international expert) At least 5 years' experience for the national forestry expert;
- Experience in forest resource assessment;
- Demonstrated experience in the sector in Sub-Saharan Africa
- Experience in ecosystem services and on their links to the livelihoods of adjacent and beneficiaries further afield relative to critical watersheds;
- Experience working in Somalia or the Horn of Africa is preferred;
- Knowledge of forest degradation due to charcoal production in Somalia;
- Fluency in English

### **Q. Agronomist (International 3 mo)**

The main roles of the International Agronomist will be to support i) Agro-Pastoral Field School establishment, including the training of 1 Master trainer, ii) fodder production and grazing reserve development in each zone and to iii) support development of drought-resilient seeds and plants for food and fodder.

In this context, his/her duties and responsibilities shall include:

- Outlining international best practices to cultivate and use drought-resistant species for all relevant ministries (Livestock, Agriculture)
- Provide advice on potential adaptation technologies for agriculture and the potential for agro-advisories based on seasonal and updated forecasts
- Collaborate with FAO, etc. and regional organizations such as International Livestock Research Institute (ILRI), Consultative Group on International Agricultural Research (CGIAR), International Wheat and Maize Improvement Centre, International Institute of Tropical Agriculture and the International Crops Research Institute for the Semi-Arid Tropics (ICRISA)
- Support training on Natural Resource Management (NRM) and Integrated Water Management (IWM) through the establishment or revival of 3 Community Based Organizations
- Supervise field demonstrations and validation plots for potential adaptation technologies in all the zones
- Assess the needs for climate smart farming based on feedback from Agro-Pastoral Field Schools
- Develop rain-fed/pastoral drought warning thresholds in collaboration with NERAD/HADMA/SDMA to support the development of useful seasonal forecasts targeted for agriculture.

#### **Qualifications Required**

- A post graduate academic degree, preferably a PhD, in Agronomy/Agriculture/Livestock-Rangeland management.
- A minimum of ten years of varied experience in Agronomy/Agriculture/Livestock-Rangeland, soil-water management, and Technology Transfer.
- Experience in establishing Farmer Field Schools with emphasis on supporting agro-pastoralists.
- Excellent communication and writing skills in English (requirement)

### **R. Water Production / Mobilisation Technical Expert (International 6 mo)**

The International Water Production / Mobilisation Expert will provide assistance with the design and construction of water infrastructure in all zones. S/he must have experience in designing large-scale infrastructure in Africa, particularly in Arid and Semi-arid Lands (ASALs). He/she will be responsible for contributing and verifying the design of the following:

- Earth dams
- Flood control walls with gabion
- Water diversions
- Rehabilitation of canals and boreholes

S/he will be responsible for a preliminary study to confirm the hydro-geological technical siting of water mobilization works by giving the reasons for the socio-economic opportunities of these works. This preliminary study will be enriched by a study of erosion control, a detailed topographic survey and a detailed hydrological study of each watershed (evaluating means and frequency inputs, flow frequency, flood routing, sediment yield and lifetime of the work).

S/he will also identify the main geotechnical characteristics including

- The stability of the site and its foundation,
- The infiltration rates of the site and its basin,
- The quantity and quality of earth and materials necessary to construct the water infrastructure (in conjunction with the contractor).

From these studies, s/he will be responsible for supporting and validating the design calculations such as on proper drainage mechanisms and flow retardation control measures. S/he is responsible for providing all detailed designs with calculations to the Project Manager.

#### Qualifications Required

- An advanced university degree in Civil Engineer;
- A minimum of ten years of varied experience in designing and constructing water mobilization infrastructure, with at least 5 years' experience in sub-Saharan Africa;
- Experience working in Arid and Semi-Arid lands;
- Excellent capacity to lead and support geotechnical and hydrological studies;
- Ability to manage personnel and work as a team by working closely with Water Ministries
- Experience with employment creation for construction tasks with schemes such as Cash for Work
- Excellent communication and writing skills in English (requirement)

#### **S. Environmental Impact Assessment Consultant Team (International 3 mo.)**

The tasks of this EIA Consulting Team will be to:

- Describe the proposed project by providing a summary description of pertinent project components presenting plans, maps, figures and tables.
- Review the existing EIA guidelines for each zone
- Define and justify the project study areas using an internationally accepted Environmental Impact Assessment procedure.
- Describe and analyse the conditions of the physical, biological and human environment of the pilot areas. This analysis should understand the interrelationships between environmental and social components and the importance that society and local people attach to these components , in order to identify the environmental and social components of high value or special interest . The emphasis should be particularly on the analysis of water quality impacts from the use of agricultural and livestock inputs, agro-pastoral practices on groundwater and the environment, people's expectations and taking into account socioeconomic benchmarks of the project area.
- Present and analyse alternatives to the proposed project, including the "without project " , identifying and comparing the alternatives on the basis of technical, economic, environmental and social criteria.

- For the selected alternative, identify and assess the significance of positive and negative , direct and indirect environmental and social potential impacts in the short and long term , temporary and permanent , on the basis of a rigorous method.
- Identify appropriate mitigation and improvement to prevent, minimize, mitigate or compensate for adverse impacts or enhance benefits environmental and social project, including the responsibilities and associated costs.
- Identify the risks of climate change on various components of project and propose appropriate adaptation measures to improve resilience climate of the project;
- Examine the potential cumulative impacts, taking into account other initiatives in the study area .
- Develop a program of environmental and social monitoring, including indicators , institutional responsibilities and associated costs.
- Identify institutional responsibilities and needs for capacity building, if necessary, to implement the recommendations of the environmental and social assessment.
- Conduct consultations with stakeholders to hear their views and concerns regarding the project . Such consultations shall be held during the preparation of the EIA report to identify key issues and environmental and social impacts, and after the preparation of the preliminary report of the ESIA to gather input from stakeholders on mitigation and bonus offered.
- Prepare the ESA report under typical content of UNDP.
- Prepare an Environmental and Social Management Plan (ESMP) in accordance with UNDP canvas . This management plan should be presented in a separate document EIA report .
- Document Stakeholder validation of environmental and social safeguards.

#### Consultant Team Profile

The team of environmental assessment experts and an expert in social impact assessment shall have at least a Masters related to the work required: Environmental Assessment, Water and Forest, Agriculture / Agronomy, Planning, Environmental Science, International Development , hydrology and hydrogeology or related discipline . Environmental experts must have at least 10 years of experience in environmental assessments. The expert assessment of social impacts must have at least a Masters in sociology, socio -economics, agricultural economics or related discipline. They must have at least 10 years' experience in social impact assessment of development projects . Both experts should be familiar with UNDP procedures for environmental and social assessment. The team must be familiar with the mobilization of surface water and groundwater.

#### **T. NGO Baseline Survey Team (National 3 mo.)**

An NGO will be hired to conduct a baseline survey on socio-economic conditions, infrastructure and services, livelihoods, gender roles, land-use patterns, climate variability and potential/current uses of adaptation technologies. In the beginning of the project, the NGO will be recruited to conduct a water / land rights study for the eight districts to ensure that there will not be conflicts. Their findings will also be used to validate baseline values in the Project Results Framework. Towards the second year of the project, an NGO will also be responsible for conducting a baseline analysis of women business group's current incomes.

#### **U. Gender Expert (National 1 yr)**

A national Gender Expert will be recruited to support the project over 1 year intermittently throughout the duration of the project to strengthen gender considerations in climate change adaptation. S/he will be responsible for the following;

- Assisting with the training and workshops on managing climate adaptation projects, ensuring that women have at least 30% representation;

- Highlighting potential climate change events in Somalia that may have gender-specific impacts (focus on agriculture, infrastructure and rural development);
- Ensuring sectoral analyses of climate vulnerabilities consider the gendered impacts of climate change;
- Assisting to develop a strategic approach, guidelines and methodologies for strengthening the integration of gender considerations in climate change adaptation by recommending gender mainstreaming for existing and planned policies, plans, laws and regulatory frameworks, such as the planned National Climate Change Policy and Land-Use policies;
- Support to ensure that small grants for community-based EbA and NRM measures include priorities identified by women (Activity 2.1.9)
- Ensuring that district Disaster Management Committees have appropriate gender representation;
- Assisting in the implementation of Output 2.4 by supporting women's livelihoods diversification with the introduction of adaptation technologies aimed to reduce dependence on dwindling natural resources;
- Supporting the Monitoring and Evaluation (M&E) expert in the Project Implementation Team to find ways to segregate and aggregate gender specific data and information in the project M&E process;
- Assist to organize and implement 2 workshops to highlight gender considerations for sustainable adaptation

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## **Annex 6: Stakeholder Involvement Plan**

1. The stakeholders identified during project preparation will continue to be involved in project implementation. A stakeholder involvement plan has been created to provide a framework to guide interaction between implementing partners and the key stakeholders, particularly end-users to validate project progress. All stakeholders involved in the NAPA formulation and LDCF consultations will be continuously involved to track the efficacy of stakeholder capacity building, both operationally and technically. Also, the Women's Organizations, Ministries of Women's Affairs, and female government officials and representatives will continue to be involved and consulted in order to ensure women are properly engaged and are active participants in the planning, implementation and monitoring of the project. A major criteria for selection of NGOs/CSOs for carrying out the baseline study will be the presence or gender capacity within the organization, to ensure that gender disaggregated data is collected and an M&E framework that reflects the gendered dimensions of climate change is developed.

2. During implementation, the communication and consultation process will be divided into three main phases:

3. Phase 1 – Developing a strategy and action plan:

This is the mobilization phase in the first year of the project. The details of the activities and implementation structures will be designed, partnerships for action will be forged and stakeholder engagement will focus around these design processes. The Environmental Impact Assessment and the Technical Studies will take place simultaneously during this phase. These two types of studies will focus on identifying any negative impacts of the proposed infrastructure projects along with mitigation measures. The technical studies will look at the feasibility of the projects, and will include cost-benefit analysis. Local authorities and communities will be consulted by both the EIA and Feasibility Study teams. Moreover, meetings will be conducted at the district level to gather local level data on climate impacts, trends in natural resource management, and other important baseline information. During these meetings, religious leaders, traditional elders, cultural groups and women's groups will be important stakeholders.

4. Phase 2 – Consultation through implementation:

This is the main implementation phase where investments will be made on the ground in the target areas and stakeholder consultation about engagement will focus on output-oriented actions. During this phase, community stakeholders will be deeply involved through cash, labour and in-kind distributions. The target for these contributions will be 20% of the total project costs where possible. The community will also participate in the implementation phase by facilitating access to the project areas for the project staff and consultants, and also helping to bring together a broad spectrum of the community to participate in any capacity building and awareness raising activities organized under the project.

5. Phase 3 – Project completion and scale up promotion:

The third and final phase represents the completion of the project. The plans for scale-up and long-term sustainability of the LDCF investments will be developed. Consultation will focus on learning, bringing experience together and looking at processes for continued post-project impact.

6. Specifically, in Phase 1, Technical Studies will begin from the project's inception. The studies are planned to take place during the first 2 quarters of the project, in which technicians will collect data from the field and gather indigenous knowledge. After the first quarter, suitable sites for retention basins, micro-dams and diversion structures will be identified. Based on the sites identified, an Environmental Impact Assessment will be conducted at the beginning of the 3rd quarter to validate the appropriateness of the sites and to provide mitigation plans for any expected environmental and social impacts. The local populations in the target districts, as well as surrounding populations, will be consulted to obtain data to conduct the EIA. Ultimate locations for construction works will be

determined throughout the third and fourth quarters based on conclusions from the technical studies, EIA, and consensus among the local populations and the technical Ministries.

7. At the beginning of the project, over-arching criteria to determine training beneficiaries will be well-defined. A specific beneficiary selection group composed of community heads and representatives from the technical ministries (Ministry on the Environment, Ministry of Planning and the disaster management authorities) will be created to conduct the field consultations to see how local customs should be used to determine beneficiary selection criteria.

8. The gender-disaggregated survey, to be conducted by women-focused NGOs/CSOs, will also take place during Phase 1. The survey will be used to obtain baseline data, such as for adaptation technology preferences.

9. In Phase 2, public consultations will become more of an ongoing exchange of information where there will be two main purposes:

- To gather information from beneficiaries and stakeholders about the impact and effectiveness of the planned water mobilisation (micro-dam, reservoir, cistern, well and shallow well placement) and training strategies (Training of Trainers or lead farmers on-the-farm, demonstration plots); and
- To provide interested government and donor stakeholders and the general public with information about the progress and impact of the project as it is implemented.

10. Phase 3 will be a process of ensuring completion, hand-over and long-term sustainability of the LDCF investment. Consultation will focus on bringing experience together, sharing key lessons learned (through the UNDP ALM and other forums) and looking at processes for promoting scale-up of this project in order to build the resilience of more rural mountain rain-fed farmers and pastoralists.

Overall, the types of consultation mechanisms to be used include:

- Meeting with the members of the newly formed National Climate Change Committee to obtain lessons learned;
- Discussion with local government authorities and local leaders on their roles in sustaining the project activities
- Meetings with NGOs/CSOs to confirm their roles in project implementation in the future;
- Discussions with the trained participants of the FFS to determine the lessons learned and development of case studies
- An external evaluation of the project that will highlight the successes, challenges and lessons learned for dissemination to NGOs, donors and government stakeholders.
- Exposure visits for neighbouring districts to the project districts to visually observe and meet with communities that have implemented soil and water conservation principles and are employing adaptation technologies
- Identifying successful women-led enterprises for adaptation technology and linking them with additional finance and supporting them in gaining recognition

## **Annex 7: Consultation Reports**

### Galgaduud Region/Balanbale and Guriel Districts (South Central)

289. Galgaduud Region in South-Central Somalia is bordered by Ethiopia, the Somali regions of Mudug, Hiran and Middle Shebelle, and the Indian Ocean. Galgaduud's capital is Dhusamareb and it comprises of five districts: Caabudwaaq, Cadaado, Ceelbuur, Ceeldheer, and Dhusa Mareb. Galgaduud Region is low lying with an altitude ranging between 60 and 300 meters above sea level.

290. Three major tubewells are all found in Caabudwaaq city and are the only permanent sources of water supply and have tremendous effect on settlement patterns and economic activities within the region. Seasonal streams are also found all over the region and greatly interfere with road transportation during the wet seasons. Representatives from Balam Balay also indicated that the rainy season has considerably shortened over the past few decades and that there are more extreme high and low temperatures. Agriculture is a relatively minor source of livelihood in the region.

### Middle Shabelle Region/Jowhar District (South Central)

291. Middle Shabelle, named after the Shebelle River that passes through this region, is located in the central regions of Somalia. The region borders Galgaduud to the north, Hiran to the west, Lower Shabelle and Banadir regions to the south and the Indian Ocean to the east. A pre-war census estimated the population at 2 million and today the Regional Council claims that the region's population is around 1.5 million. The region consists of seven districts: Jowhar - the regional capital, Balad, Adale, Aden Yabal, Warseikh, Run-Nigrod and Mahaddey.

292. The region supports livestock production, rain-fed and irrigated agriculture and fisheries, with an annual rainfall between 150 and 500 millimetres. Covering an area of approximately 60,000 square kilometres, the region has a 400 kilometre coastline on the Indian Ocean. The Shabelle river runs for 150 kilometres through the region. A number of shallow wells and a few boreholes also exist along the Shabelle catchments. From the SWIMS database, the Middle Shabelle has at least 52 shallow wells and four boreholes. Whether all of these are functioning is not known and further assessments are required.

293. Jowhar town is the capital town of the Middle Shabelle region. The town lies 90 km (50 mi) along a major road north of Mogadishu. There is also an airport in the northern part of the town. Jowhar experiences both drought and floods.

### Lower Shabelle Region/Afgooye District

294. The Lower Shabelle region lies to the west, northwest, and southwest of Mogadishu. It is bordered to the south by the Juba region, to the east by the Indian Ocean and Mogadishu, the Middle Shabelle region to the north and the Bay region to the west. The topography is composed of plains, coastal areas and semi-desert stretches. The region comprises eight districts: Merka (the regional capital), Afgoi, Wanle Weyn, Koryoley, Sablale, Brava, Kurtun Warrey and Audegle. There are no reliable population figures, only estimates. Food Security and Nutrition Analysis Unit Somalia (FSNAU), which publishes regular analyses of living conditions for the Somali population, approximate that 850,651 people live in Lower Shabelle (FSNAU 2013). Lower Shabelle is thereby the most populated region in Somalia after Banadir (Mogadishu and the surrounding area). The estimates are based on projections of previous censuses. They therefore do not include internally displaced persons who are staying in the region. The population is classified under four categories; nomadic agricultural, agricultural, nomadic, and urban sedentary.

295. Most of the region consists of lowlands and is dominated by the river that has given the region its name – the Shabelle. The Marka and Barawe districts have a long coastline. The Afgooye district has some coastline, while Wanle Weyn, Qoryooley, Kurtunwarey and Sablale are inland districts. The soil is fertile on both sides of the river, but the area is prone to flooding. The inland areas largely consist of plains and scrubland. The coast is covered in sand and has little vegetation. Spread acacia trees grow throughout the region. Like the rest of Somalia, the climate in Lower Shabelle is hot and dry all year.

296. Agricultural labour is the most important source of income for most of the very poor and poor households in the riverine areas. Other income sources ranked in order of importance include selling of agricultural produce and self-employment, respectively. The main agricultural activities which generate income especially for the poor and the very poor households include land preparation, seed sowing or planting, weeding, irrigation, Guarding of crops, as well as harvesting, de- husking and threshing of dry harvest. Most middle and better-off households obtain seeds from their own harvest. These households also purchase fertilizer from the market and use it mainly for non-cereal crop production (banana, lemon, onion, etc). The vast majority of the poor (about 80%) depends on seed purchases. In Lower Shabelle riverine areas, knowledge on agricultural production exists but the institutional and human capacity to support knowledge transfer that can accelerate the adoption of new technologies for increased agricultural production is inadequate.

297. Afgooye is a very old district town in Lower Shabelle Region, located about 30 km north-west of Mogadishu. The broader Afgooye District has a total population of 135,012 residents<sup>64</sup>. The Shabelle River divides the main town of Afgooye. The district is famous for its agriculture, mainly developed through pump irrigation. Due to its geographic position in the river floodplain, this district has been affected by some of the historical river flood occurrences in 1961, 1997-98, 2006 and 2007; and also remains at risk of future floods.

298. Drought also plagues the district. Last year, the FSNAU Post Deyr 2012/13 analysis classified all the rural livelihoods in Lower Shabelle Afgooye district as stressed, and predicted 1.05 million people to remain acutely food insecure. During times of drought, the rural poor in Afgooye district have minimally adequate food consumption, cannot afford essential non-food expenditures, and are unable to maintain their livelihoods. Due to drought and former Al-Shabab controlled zone, humanitarian assistance could not reach the rural populations in agropastoral and pastoral populations in Afgooye district, which led to food insecurity among the lives of rural agropastoral and pastoral communities.

#### Nugaal Region/Dangaroyo District (Puntland)

299. Nugaal is one of the regions of Puntland, with Garowe serving as the zonal capital. The region of Nugaal is situated in the north-east of Somalia and borders Mudug to the south, Bari region to the north, Sool and Ethiopia to the west and has a coastline on the Indian Ocean to the east. The region comprises four districts: Garowe, Burtinle, Eyl and Dangoroyo. Garowe is the regional headquarters, as well as the capital of Puntland State.

300. A major geographic feature of the region is the Nugaal Valley, a large shallow drainage basin fed by the Nugal and Dheer seasonal rivers during the April-June rainy season. The Nugaal Valley is a key pastoral area which spans across four regions of Nugaal, Sool, Sanaag and Togdheer. Political stability has been re-established in the region after past episodes of civil strife and has resulted in relatively secure conditions in the region.

301. The region is semi-arid and has a warm climate, with temperatures ranging between 27°C and 37°C. The region receives 400 mm of rainfall annually and its valley is rich with pasture for livestock. Similar to the rest of northern Somalia, there are four main seasons which include Jilal (from January to March), Gu (the main rainy season from April to June), Xagaa (from July to September, the second dry season) and the Deyr (the shortest and less reliable rainy season between October and December).

302. The population of Nugaal region was estimated at approximately 145,341, of which 90,592 are rural residents and 54,749 are urban population. Another, more detailed and broader survey was undertaken by UNDP Somalia and the results presented in 2008 as a working paper: Participatory Community Census for Poverty Assessment and Mapping in Nugaal Region. Though total population was not estimated, the number of settlements were counted. The survey indicated that Nugaal has 92 settlements, out of which one was deserted during the time the census was conducted. Floods and drought are the main causes of desertion. Satellite settlements constituted three-fourths of the total.

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<sup>64</sup> Regions, districts, and their populations: Somalia (Draft), UNDP, 2005

About three-quarters of the settlements are permanent, while 15.4% are temporary in nature. A small proportion of 7.7% settlements are semi-permanent<sup>65</sup>. A large portion of the region is sparsely populated; population sizes vary widely among the four districts, with the largest proportion of the population in the region residing in Garowe. Dangoroyo District has 8 permanent and 5 semi-permanent/temporary settlements. Settlements in Dangoroyo are at a mean distance of 167 km from the regional headquarters.

303. The main form of administration in Nugaal is the regional administration, which serves the majority of the settlements. However, traditional forms of governance, in the form of councils of elders, have been instrumental in re-establishing political stability. Accordingly, community elders are reported to be governing the settlements. In the management of dispute resolution, the census established that despite the recent establishment of public administrative institutions, the traditional elders and clan-based structures still prevail. About 95% of the region's settlements reportedly use community elders, while 4.4% use the judiciary as institutions to provide justice. Similarly, a combination of community elders and administration assist in maintaining peace and security in the region. In Dangoroyo, 12 of the settlements reported to be governed by elders and 1 by the local administration.

304. The region is made up of both arid and semi-arid lands, with most inhabitants relying on livestock production as the main economic activity for the provision of food, income and employment. However, the livestock sector is fragile due to recurring droughts that sequentially undermine the production of meat and milk, livestock prices, as well as income generation. Crop production is less significant, and accounts for only 6.7% of the settlements, which are mainly dependent on rain-fed farming. In Dangoroyo, 69% of food is purchased, whereas 30.8% is through own livestock rearing. The main source of income for the families in Dangoroyo is through small businesses. Among the main indicators of poverty, the food poverty situation in the region is especially dismal, with several residents living on Zakat and other forms of charity. Further, an assessment of the food security shows that the majority of settlements are not self-sufficient in staple food items, especially rice, which is often sourced from outside the region. However, the region is self-sufficient in livestock products (milk, ghee and meat).

305. Although water is readily available within the majority of settlements in the region during the wet season, it is a scarce commodity during the dry season. Residents of 49.5% of the settlements have access to water during the dry season. This is largely attributed to the aridity of the region. Additionally, in order to have access, the community is forced to walk long distances, with a mean of 52 km, which is too long and inefficient, considering several hours are wasted in the search for water. In Dangoroyo, all of the settlements have access to water during the wet season. Berkads are the most common source, followed by shallow wells, streams and boreholes in the listed order of importance. Boreholes and shallow wells replace berkads during the dry season. However, berkad is still rated among the leading three sources of water during the dry season. In Dangoroyo, 46% of the settlements report no access to the main water source during the dry season. They report a mean distance of 50 km to access a water source.

306. During consultations for developing the LDCF1 project activities, residents of Dangoroy indicated that 6 settlements are relying on berkads, many of which are damaged and need rehabilitation. During the dry season they are extremely water stressed, though two boreholes used to operate in the District. Both of them are in disrepair. One of them is saline and located about 1 km away from the main town, and is used only for livestock due to lack of alternatives. The other has been damaged by floods. Boreholes require repair and construction of a gabion wall for protection.

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<sup>65</sup> A main settlement is where public utilities and social services are normally situated/provided. A satellite settlement is attached to a main settlement and relies on it for most of its social services; it is generally under the control of the elders. Semi-permanent settlements are typically lived in for one season, mostly during the farming or fishing seasons, and abandoned during the rest of the year. These settlements have only make-shift housing structures.



307. Droughts have occurred in every district of Nugaal region, whereas floods have been somewhat limited, though very severe and damaging when they do occur. Tropical cyclones along the coast has led to extensive flooding causing loss of life, livestock and property and displacement of communities. In Dangoroyo district, Burao district reported that 27% of the settlements in the district were affected by floods in the 10 years prior to the survey conducted in 2007. The major impacts of these floods were displacement of people and loss of livestock.

#### Bari Region/Bandar Beyla District (Puntland)

308. Bari is a region of Puntland that is bordered by the Somali regions of Sanaag and Sool to the west, Nugal to the south, as well as the Gulf of Aden to the north and the Indian Ocean to the east. In terms of landmass, Bari is the largest province in the Federal Republic of Somalia. The highest point in this region is Mount Bahaya (2200 meters); other notable peaks include Karkaar. In 1998, Bari became a part of Puntland. In the years thereafter, Puntland changed its internal administrative divisions and divided up Bari into additional regions, with the boundaries and the districts reshuffled and redefined. For planning purposes, the original designation of the Bari region will be used. Bosaso is the region's capital city. The population in the Bari region is estimated at 367,368 (UNDP 2005) with an almost even divide between rural/urban, 188,005 and 179,633 respectively. Approximately 55 percent of the population in Qardho, Bender Beilla, Iskushuban, Kandala and Alula are pastoralists. The region's economic activities include livestock, fishing and frankincense with part of the urban population depending on casual labour at the port.

309. Bander Bayla, the selected district for many of the project activities, is located in the north eastern Bari Region of Somalia which lies around 240 km east of Gardo and 250 km south east of Iskushuban District in Bari Region of State of Puntland, Somalia. Bander Bayla District occupies area of approximately 14,400 square km. The district is located around 32 metres above sea level and is characterized by mountainous coastal topography called Deex and the Sool Pastoral Plateau, flat lands that area sparsely covered with grasses and shrubs. Most of Bander Bayla is arid or semi-arid with temperatures between 11°C to 35°C. Average rainfall in the district ranges from 100-200mm annually. Most of the terrain is suitable for pasture but not for expansive crop production due to the scarcity of water, water salinity, poor farming systems and overall lack of ecosystem management.

310. In 2008, a survey was undertaken by the UNDP Somalia and the results presented in a working paper: Participatory Community Census for Poverty Assessment and Mapping in Bari Region. The region's population is concentrated in settlements in the district of Bosaso. 206 settlements were surveyed during the Participatory Community Census, out of which 22 are independent<sup>66</sup>, 61 main and 95 are satellite in nature. The remaining settlements were deserted. A rough estimate of Ministry of Planning and International Cooperation (MoPIC) in 2007 shows that Bander Bayla District has the population of around 67,000 people in 2007 of which almost two third is nomadic and only 26 per cent lives in the permanent villages and the town of Bander Bayla.

311. The public administration system is dominant in most settlements in the region, although it is not used by the residents for the management of peace and security. The role of managing peace and security management is largely taken on by the communities. In accordance with the legal framework set out in the Puntland Constitutions, Bander Bayla has 23 elected local councils that have a specific mandate to deliver basic services to communities. The district has four departments namely admin and finance department, social affairs department, planning department and public work department which are staffed by 20 people. There are a total of 61 people employed in various government regional offices located in Bander Bayla District. Additionally, the Municipality of Bander Bayla has employed 20 people<sup>67</sup>. The district councils were only recently established, in 2011, and there are yet to be developed any notable by-laws or documents, with exception of a 3-year District plan. The census also indicated that cultural groups are the most active social groups in the region, followed by community councils and religious groups. This reflects strong cultural and religious beliefs and reliance on informal institutions and mechanisms for management of resources and governance. In

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<sup>66</sup> An independent settlement is one without satellite settlements attached to it.

<sup>67</sup> JPLG District Profile of Bandar Bayla, 2012

Bandar Beyla, 93.8% of settlements indicated that they rely on elders for governance issues and dispute resolution.

312. There is limited availability of mass media in the region. Newspapers are only available in Bosaso and Qardho districts, while televisions are available in Bosaso, Qardho, Iskushuban and Qandala. Just fewer than 10% of Bari's settlements have access to electricity connection, while piped water supply is available to half this number – 5%-- of the settlements. High Frequency (HF) radio facilities are available to more than half of the settlements in the region. Residents in about 13% of the settlements have access to telephones, while roughly 5% have access to internet and email facilities. Mobile phones are only available in Bosaso and Qardho.

313. Most residents in the region rely on purchases, own livestock production and gifts as sources of food for their families. The sale of livestock products, own business, and self-employment are the main sources of income for families in the region. Vegetables, including lemon, tomatoes, lettuce and onions, are among the main crops sold, although residents of Qandala do not sell any crops. Some of the main livestock products sold are milk, meat and ghee. This is noted in all the districts, except Bandar Beyla, which indicated live goat as the main form of livestock sold.

314. In Bari region as a whole, 87.6% of the settlements have access to a main water source during the wet season, while roughly only 10% of the settlements in all districts have access to water during the dry season. Most settlements in the region depend on unprotected sources of water including berkads, boreholes and shallow wells for water during the wet season. During the dry period, berkads are filled with water trucked from long distances. The water tankers used for water trucking are privately-owned and most are in bad condition. As many people continue to depend on these trucks for their water supply, it is necessary to investigate how government authorities might in future guarantee distribution without taking over businesses from entrepreneurs. Suppliers need to be educated on how to keep water free of contamination during filling, transportation and distribution

315. Other than private water harvesting structures and shallow wells, the water system in the district is administrated by the municipality and each 1 cubic meter of water costs 20,000 Somali Shilling which is equal to around US\$1. There are water kiosks installed in the villages where people take water and only few houses are connected to pipeline. There is a water spring in Bander Bayla administered by the municipality which is estimated to supply 84,000 cubic meter of water to 950 houses in Bander Bayla. There are no boreholes in the district, a major issue cited by residents during the LDCF1 project activity development consultations. Stakeholders from the region also indicated that though berkads have been an important source of water, they are not interested in further investment due to the maintenance issues, short-term benefits and lack of water during the dry season when they really need water. Stakeholders have an interest in constructing large dams which can benefit the entire district and can be managed as public private partnerships between government authorities and communities.

316. The region has been experiencing frequent cases of drought over the last ten years; 97.8% of the surveyed settlements reported to have experienced droughts. Recurring spells of drought have resulted in the loss of human life and livestock, displacement of families and increasing poverty. The effects have been different in each district, with the district of Bandar Beyla reporting increasing widespread poverty. Flooding also affects the region. Communities from as many as 48.3% of the settlements in Bari report to have experienced flooding in the last ten years. Notably, all settlements in Bandar Beyla have been hit by floods during this period. The impact of the occurrence of floods has been catastrophic in the region resulting in the loss of livestock in most settlements in Bandar Beyla.

317. Severe land degradation further exacerbates the impacts of floods and droughts. According to the NRM Survey Baseline Report carried out by the EU, Bari is severely affected by land degradation. 34% of the degraded land is due to overgrazing of pasture land, 32% due to deforestation, 37% due to soil and gully erosion, and 7% due to invasive species. Sustainable Land Management practices are scattered and insufficient, though many organizations and donors are beginning to tackle the issue of land degradation. Important vegetative cover, including grass species such as Gargaraad and Ayaxmakare have become endangered and may soon become extinct. Moreover, it is conservatively estimated that 20% of the grazing lands in Puntland is now covered by gullies. This is mostly due to



increased intensity of rainfall, reduced vegetative cover due to drought and deforestation and unregulated vehicular movement across plains. Commercialization of natural resources has had a significant impact on land degradation with massive deforestation for charcoal, fuel wood, gums and resins.

### Somaliland

#### Togdheer Region/ Burao District (Somaliland)

318. Togdheer is one of the six regions of Somaliland. The region has in the recent past enjoyed relative peace and security, which has enabled it to rehabilitate the damaged infrastructure and restore public service operations, albeit at modest levels. The arid weather conditions restrict the region's potential, restricting it to livestock production which provides food, income and employment to majority of the population. Crop production is less significant, and is practiced by only 6.7% of the settlements in the region, mainly using rain-fed mode of farming. Those engaged in farming mostly grow sorghum and maize.

319. A survey was undertaken by UNDP Somalia and the results presented in 2007 as a working paper: Participatory Community Census for Poverty Assessment and Mapping in Togdheer Region. The survey indicated that there is a population of 700,000 people living in the region.<sup>68</sup> Most of the region is sparsely populated, with a population density of about 7 persons per square kilometre. The largest proportions of the region's population lives in the Burao district, residing in 115 settlements. However, 29% of these settlements are semi-permanent due to the nomadic mode of livelihood of the residents.

320. Water is readily available to the majority of the settlements in Togdheer during the wet season through berkads and ponds, as well as boreholes and streams. However, water resources are extremely scarce during the dry season, which is largely attributed to the aridity of the region, catchment area degradation and lack of infrastructure to store water. FAO-SWALIM's study in 2007: Rural Water Supply Assessment indicated that in Togdheer region as a whole, there are about 4 operational boreholes, 980 shallow wells and 5000 berkads. According to stakeholder consultations, the average distance to a water source during the dry season is a daunting 61 kilometres.

#### Woqooyi Galbeed/Hergeisa District (Somaliland)

321. Woqooyi Galbeed, also known as Maroodijeeh, is bordered by Ethiopia to the south, the Somali regions of Awdal, Sanaag and Togdheer, and the Gulf of Aden. The region of Woqooyi Galbeed comprises three districts: Hargeisa, Berbera and Gebiley. The regional capital of Woqooyi Galbeed is Hargeisa, located in Hargeisa district. Between 1988 and 1990, and again from 1994 to 1996, Woqooyi Galbeed experienced conflict, destruction of infrastructure, and ensuing displacement of populations. However, the region as a whole has experienced rapid recovery and resultant peace. Although a census has not been conducted, it is estimated that there are 1.3m people living in the Maroodijeeh region.<sup>69</sup>

322. In 2008, a survey was undertaken by the UNDP Somalia and the results presented in a working paper: Participatory Community Census for Poverty Assessment and Mapping in Woqooyi Galbeed. The survey indicated that across the districts of Woqooyi Galbeed, agro-pastoralism, cultivation and pastoralism are the most important sources of livelihoods, with rain-fed farming more significant in Hargeisa and Gebiley, in comparison to Berbera. In the rural areas of Hargeisa outside of Hargeisa town, the target district for the LDCF1 project, 68% of the communities are engaged in agro-pastoralism, followed by 25% as pastoralism alone. The top three crops grown in this region are maize, followed by sorghum and cowpea. The main livestock products that are sold include predominantly milk, followed by ghee and then meat.

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<sup>68</sup> Population statistics provided by the Ministry of Ministry of National Planning and Development in Somaliland

<sup>69</sup> UNDP Country Office unofficial census statistics

323. In Hargeisa District, 20% residents report that they do not have access to a main water source, which rises to 60% without a main water source in the dry season. This result does not include Hargeisa town. More than half of the residents of Hargeisa district do not have adequate water supply during the dry season. This number rises significantly during drought years, which are said to occur with the frequency of 1-2 years over the past decade in various regions of Somaliland. FAO-SWALIM's study in 2007: Rural Water Supply Assessment indicated that in Woqooyi Galbeed region as a whole, there are about 3 operational boreholes, 465 shallow wells and 40 berkads.

324. According to FAO-SWALIM's report: Land Degradation Assessment and Recommendation for a Monitoring Framework in Somaliland, published in 2009, Woqooyi Galbeed exhibited moderate land degradation during the time of the study. Community and government consultations indicate that land degradation has been continually worsening in the region since the study was undertaken. North of Hargeisa town, land degradation is mostly due to agricultural practices and has led to a decline in fertility in these areas. To the northwest of Hargeisa town, the area is mostly characterized by soil erosion by water including loss of topsoil, gully erosion and riverbank erosion. Also in this northwest region is water degradation leading to desertification and dropping groundwater levels. The south and southeast of Hargeisa town is generally impacted by biological degradation due to reduction in vegetation cover, loss of vegetation species and habitats and decline of biomass.

325. The Geed Deble well field supplies potable water to the town of Hargeisa and is located in the Biji catchment which covers approximately 3,560 km<sup>2</sup>. The well field supplies the approximately 1.2 million residents of the capital of Somaliland. However, the main pumping station and boreholes are at threat from flooding as a consequence of high runoff in the catchment area. Flooding events that took place in 2003, 2005, and 2011 damaged critical infrastructure. UNDP, through its PREP program was able to assist by construction of a 400 meter long gabion which has not only effectively protected the boreholes and pumping station, but has also increased agricultural production for the communities living behind the gabion walls. However, due to further erosion of the adjacent riverbed, an extension is required to the existing gabion.

326. Dams in Somaliland range in size from small harvest balleys and wars to big earth dams of capacity up to 150,000 m<sup>3</sup>. Six high capacity dams were built in rural Somaliland in the 1980s, funded by the World Bank and aimed at supplying water for pastoralists along the Somalia-Ethiopia border. The dams had generator rooms, attendant rooms, animal troughs and kiosks. At present there are 8 high capacity dams in the LDCF1 project areas. All 8 of these dams require rehabilitation and improvement in different capacities. Smaller capacity dams have also been constructed, mostly by NGOs, to increase water availability in rural areas. FAO-SWALIM's Rural water Supply Assessment carried out in 2009 indicated that there are 12 small dams in Awdwal and Woqooyi Galbeed.

327. However, in general dams are not very common in Somaliland. This is mostly due to lack of suitable dam construction sites where leakage will be minimal, high costs of construction, limited machinery for construction, high maintenance costs to silt removal requirements and land degradation due to overgrazing as dams tend to attract settlement in the surrounding areas.

328. At present, water is extracted from the water source manually using a bucket and a rope and then transported either on donkeys or camels, or by women. Some dams use pumps to extract water is a much preferred method as it reduces the risk of contamination. However, it can increase the risk of overexploitation of the source and thus require proper management systems.

## Consultations for LDCF Project Formulation

### Objectives of the *Stakeholder Consultations for LDCF Project Formulation*

1. Establish a baseline at each selected site by gathering information on existing capacities including services, projects, programs, partners, institutions and infrastructure that complement the NAPA project objectives
2. Identify, detail and prioritize
  - a. vulnerabilities and adaptation needs of each selected project site
  - b. adaptation activities to be implemented for each selected project site, along with expected impacts and potential risks and mitigation measures
  - c. institutional capacity development needs of government authorities at the national, zonal, regional and district levels.
3. Undertake a participatory exercise with all stakeholders to define indicators for monitoring the outcomes and outputs of the project

<b>Location</b>	<b>Date</b>	<b>Objective</b>	<b>Participants</b>
Hargeisa	03/04/14	Identify and prioritize needs, activities, baseline capacities, and monitoring indicators for each project site	Traditional Elders, Religious Leaders, Women Groups, Youth Groups, NGOs, Academics and Private Sector
	05/04/14	Identify and prioritize capacity needs, activities, monitoring indicators and implementation modalities.	Government line departments, district government officials, training and educational institutions
Garowe	08/04/14	Broad-based government consultation on overall environmental issues in Puntland with special session on NAPA project priorities	Government institutions
	09/04/14 – 10/04/14	Identify and prioritize needs, activities, baseline capacities, and monitoring indicators for each project site	Traditional Elders, Religious Leaders, Women Groups, Youth Groups, NGOs, Academics and Private Sector
Mogadishu	15/04/14	Identify and prioritize capacity needs, activities, monitoring	Government line departments, district government

		indicators and implementation modalities.	officials, training and educational institutions
	16/04/14	Identify and prioritize needs, activities, baseline capacities, and monitoring indicators for each project site	Traditional Elders, Religious Leaders, Women Groups, Youth Groups, NGOs, Academics and Private Sector

### Consultation Objectives

- To develop a list of activities to be implemented under the GEF/LDCF funding mechanism
- To detail the impacts, risks, costs and benefits of the listed activities
- To understand existing capacities, institutions, partners, programs and structures that can be capitalized upon by the LDCF Project
- To discuss community role in implementation

### Site Selection Methodology

A site selection matrix was developed in order to facilitate the selection of districts for implementation of the LDCF project. Each district was given a ranking against the following factors:

1. Annual Precipitation: Water scarcity is a major concern, with climate change exacerbating total annual precipitation as well as rainfall variability
2. Flooding: For South Central, the frequency and extent of seasonal floods were considered, given that flooding is a major climate concern for this region.
3. Security Situation: To ensure that UNDP and implementation partners are able to access and work safely in the selected districts, this criteria is included.
4. Accessibility/Distance from Major Town Centers: Given that this is the first climate adaptation project in Somalia, the LDCF project aims at demonstrating high impact with the intention of opening up additional financing opportunities, which will enable work to be done in more remote and difficult areas. For this reason, sites that are easily accessible are selected for this first demonstrative project.
5. Presence of Other Partners/Projects: The LDCF project seeks to be a flagship project in terms of synergizing activities with existing partners, programs and institutions. Thus, areas where there are existing partners are prioritized.

Once the rankings were assigned to each district, the population of the district was also taken into consideration. In order to maximize impact, districts with higher populations were prioritized.

## **Annex 8: Environmental and Social Screening Procedure**

Please see the signed Environmental and Social Screening Procedure (ESSP) attached. Risks highlighted in the ESSP have been noted in Section 2.5 and in Annex 1.

## **Annex 9: DIM Agreement**

Sourced from the Country Programme Document for the Republic of Somalia (2011 – 2015)

### **IV. Programme management, monitoring and evaluation**

14. UNDP will maintain a direct execution modality over all its programming, but with parallel efforts to support the leadership, ownership, management and direct contribution of national counterparts. All activities will take place on the basis of maximizing opportunities to empower stakeholders in an inclusive and participatory manner. Detailed annual implementation plans will be devised for the three distinct zones of Somalia to accord with the ADR and as greatly appreciated by the Transitional Federal Government, Puntland and Somaliland authorities. UNDP will continue to exercise clear and transparent principles and practices of governance over the entire portfolio, using a range of zonal, programme and project Boards that ensures participation of all partners in consultations and decision-making over the design, management, monitoring and evaluation of all substantive investments made in Somalia. UNDP will approach new international development partners with a prospective interest in Somalia and seek to lever additional South-South and regional cooperation opportunities. UNDP will continue to play a major role in the United Nations country team in support of the coordinated implementation of the United Nations Somali Assistance Strategy. For example, as a partner to the United Nations Joint Programme on Local Governance, UNDP will seek to establish other joint-programming opportunities where appropriate. Not least, UNDP will continue to invest fully in the vital and robust strategic partnership with donors.

15. In accordance with the ADR, UNDP Somalia commits to continue to improve its accountabilities through enhanced monitoring and evaluation, thereby ensuring a more effective oversight, especially where accessibility remains a challenge. As part of this effort, a Monitoring and Evaluation Unit will be established and an Oversight and Compliance Adviser will be recruited. This will be accompanied by a more astute focus on improved results-based management and result reporting. Insecurity is likely to remain a significant obstacle limiting the exposure and contact of UNDP “in-country” with key government agencies, implementing partners, community representatives and with the Somali people in general. As a result, some quality assurance functions have been devolved upon a local oversight agency for monitoring and evaluation purposes. Analytical capabilities in relation to conflict and peacebuilding will be strengthened to inform programming decisions and critical risks to the country programme document results framework. Updates of risks will be reported and consulted regularly with all stakeholders. Although UNDP operations are likely to continue to be based out of Nairobi, Kenya, for the foreseeable future as a result of the devastating attacks of 2008/2009, more intense use of the UNDP sub-offices in Hargeisa (Somaliland) and Garowe (Puntland) will be made. Furthermore, a functional review of the country office will take place and selected international staff will be deployed to sub-offices from Nairobi, to the extent the security situation will allow. UNDP looks forward to being able to expand its full presence inside Somalia where and when it is deemed permissible.