



REQUEST FOR CEO ENDORSEMENT/APPROVAL

PROJECT TYPE: Full-sized Project
THE Least Developed Countries Fund¹

Submission Date: 21 August 2014
Re-submission Date:

PART I: PROJECT INFORMATION

GEFSEC PROJECT ID: 5174

GEF AGENCY PROJECT ID:

COUNTRY(IES): Republic of Yemen

PROJECT TITLE: Rural Adaptation in Yemen

GEF AGENCY(IES): IFAD

OTHER EXECUTING PARTNER(S): Ministry of Agriculture and Irrigation (MoAI)

GEF FOCAL AREA: Climate Change

Expected Calendar	
Milestones	Dates
Work Program (for FSP)	
Agency Approval Date	
Implementation Start	01 Jan2015
Mid-term Review (if planned)	31 Dec 2017
Project Closing Date	31 Dec 2020

A. FOCAL AREA STRATEGIC FRAMEWORK:

Focal Area Objectives	Expected FA Outcomes	Expected FA Outputs	Trust Fund	Indicative Grant Amount (\$)	Indicative Co-financing (\$)
CCA-1 (select)	Outcome 1.2: Reduce vulnerability in development sectors	Output 1.2.1: Vulnerable physical, natural and social assets strengthened to response to climate impacts, including vulnerability	LDCF	1,939,600	12,329,110
CCA-1 (select)	Outcome 1.3: Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas	Output 1.3.1: Targeted individual and community livelihood strategies strengthened in relation to climate change impacts, including variability	LDCF	2,278,130	11,796,560
CCA-2 (select)	Outcome 2.1: Increased knowledge and understanding of climate variability and change-induced risk at country level and in targeted vulnerable areas	Output 2.1.2: Systems in place to disseminate timely risk information	LDCF	1,520,280	740,000
CCA-2 (select)	Outcome 2.3: Strengthened awareness and ownership of adaptation and climate risk reduction processes at local level	Output 2.3.1: targeted population groups participating in risk adaptation and risk reduction awareness activities	LDCF	1,763,370	3,222,030
CCA-3 (select)	Outcome 3.1: Successful demonstration deployment and transfer of relevant adaptation technology in targeted areas	Output 3.1.1: Relevant adaptation technology transferred to target groups	LDCF	553,620	3,036,550
CCA-3 (select)	Outcome 3.2: Enhanced enabling environment to support adaptation-related technology transfer	Output 3.2.1: Skills increased for relevant individuals in transfer of adaptation technology	LDCF	1,470,000	3,006,750
Sub-Total				9,525,000	34,131,000
Project Management Cost ²			LDCF	475,000	6,421,000
Total Project Cost				10,000,000	40,552,000

¹ This template is for the use of LDCF projects and SCCF Adaptation projects only. For other SCCF projects under Technology Transfer, Sectors and Economic Diversification windows, other templates will be provided.

² GEF will finance management cost that is solely linked to GEF financing of the project. PMC should be charged proportionately to focal areas based on focal area project grant amount.

B. PROJECT FRAMEWORK

Project Objective: Improve farmland and rangeland productivity, and soil and water conservation through the rehabilitation and sustainable management of climate-proof agriculture								
Project Components	Indicate whether Investment, TA, or STA**	Expected Outcomes	Expected Outputs	LDCF/SCCF Financing*		Co-financing*		Total (\$)(*000)
				(\$)(*000)	%	(\$)(*000)	%	
1. Community Empowerment and Resilience	TA	1.1: Community Development Associations in the project Village Units (VUs) empowered on adaptive management of natural resources, with a focus on climate-smart water and soil conservation. 1.2: The adaptive capacity of farmers and other key agriculture practitioners on climate-resilient natural resources management and agriculture production is developed and demonstrated	1.1.1. Community Development Associations with good understanding of climate risks and CC adaptation measures are established and operational in all target Village Units. 1.2.1. A training of trainers programme is designed and implemented to build the capacity of service providers with special focus on gender development needs. 1.2.2. Rural households and women groups in target Village Units are trained on climate change adaptation and risk management in farming and rangeland practices. 1.2.3. Climate change adaptation and NRM are mainstreamed into basic literacy and vocational training provided for women target groups.	2,317	17.2	11,141	82.8	13,458
2. Climate-resilient Investments in Natural Resources Management and Agriculture Development	INV	2.1: Natural resource management improved and focusing on climate resilience. 2.2: Improved climate resilient agricultural production and marketing adopted.	2.1.1. Community Action Plans (CAPs) for vulnerability reduction produced, with focus on identified Landscape Vulnerable Areas of the five target Governorates. 2.1.2. Integrated water management and soil conservation investments implemented in target areas. 2.1.3. Integrated rangeland and woody vegetation restoration plans implemented in target areas. 2.2.1. Agriculture production and diversification incorporates climate-resilient management systems and technologies.	5,688	20.35	22,250	79.65	27,938

3. Climate change downscaling	STA	3.1: Institutional capacity for climate change downscaling analysis and agriculture resilience action planning developed and piloted for key crops	3.1.1. Climate change downscaling analysis for selected crops is carried out supporting participatory decision-making to adapt production, post-harvesting and marketing measures. 3.1.2. CC downscaling knowledge incorporated into daily-work by policy decision-makers, researchers and technicians. 3.1.3. Recommendations from CC downscaling analysis on at least 10 selected crops are demonstrated through research trials and disseminated to agriculture practitioners.	1,520	67.27	740	32.73	2,260
4. Project management				475	6.88	6,421	93.12	6,896
Total Project Costs				10,000		40,552		50,552

* List the \$ by project components. The percentage is the share of LDCF/SCCF and Co-financing respectively to the total amount for the component, ie., the percentage for each component will be added up horizontally to 100%.

** TA = Technical Assistance; STA = Scientific & technical analysis.

B. FINANCING PLAN SUMMARY FOR THE PROJECT (\$)

	<i>Project Preparation*</i>	<i>Project</i>	<i>Agency Fee</i>	<i>Total at CEO Endorsement</i>	<i>For the record At PIF</i>
SCCF Grant	80,000	10,000,000	950,000	10,000,000	10,000,000
Co-financing		40,552,000	0	40,552,000	55,000,000
Total		50,552,000		50,552,000	65,000,000

* Please include the previously approved PDFs and PPG, if any. Indicate the amount already approved as footnote here and if the LDCF/SCCF funding is from GEF-3. Provide the status of implementation and use of fund for the project preparation grant in Annex D.

C. SOURCES OF CONFIRMED **CO-FINANCING**, including co-financing for project preparation (expand the table line items as necessary)

<i>Name of co-financier (source)</i>	<i>Classification</i>	<i>Type</i>	<i>Amount (\$)</i>	<i>%*</i>
IFAD	Impl. Agency	Soft-loan/Grant	25,169,000	62 %
IDB	Multilat. Agency	Soft loan	15,383,000	38 %
Total Co-financing			40,552,000	100 %

* Percentage of each co-financier's contribution at CEO endorsement to total co-financing.

D. LDCF/SCCF RESOURCES REQUESTED BY AGENCY(IES) OR COUNTRY(IES)*

<i>GEF Agency</i>	<i>Fund Type</i>	<i>Country Name/ Global</i>	<i>(in \$)</i>			
			<i>Project Preparation</i>	<i>Project</i>	<i>Agency Fee</i>	<i>Total</i>
Total Resources						

* No need to provide information for this table if it is a single country and single GEF Agency project.

E. PROJECT MANAGEMENT BUDGET/COST

Cost Items	Total Estimated person weeks	GEF (\$)	Other sources (\$)	Project total (\$)
<i>Local consultants*</i>	336 (GEF Project Coordinator)	126,000	4,895,773	5,021,773
<i>International consultants*</i>				
<i>Office facilities, equipment, vehicles and communications**</i>			2,343,862	2,343,862
<i>Travel**</i>				
Total		126,000	7,239,635	7,365,635

* Provide detailed information regarding the consultants in Annex C.

** Provide detailed information and justification for these line items.

F. CONSULTANTS WORKING FOR TECHNICAL ASSISTANCE COMPONENTS:

Component	Estimated person weeks	GEF(\$)	Other sources (\$)	Project total (\$)
<i>Local consultants*</i>		2,072,301	163,991	2,236,292
<i>International consultants*</i>		163,991	200,000	363,991
Total		2,236,292	363,991	2,600,283

* Provide detailed information regarding the consultants in Annex C.

G. DESCRIBE THE BUDGETED M&E PLAN:

1. Project monitoring and evaluation will be conducted in accordance with established IFAD and GEF procedures. In line with the GEF/LDCF operational principles, the LDCF M&E activities will be country driven and provide for consultation and participation in a decentralized manner, actively involving target groups and service providers, who will be duly informed about the plans, implementation and the results of evaluation activities.
2. The main objective of the proposed LDCF project will be to lessen the impact of climate change on vulnerable rural groups as well as on natural resources critical for sustaining agricultural production and increase food security. The project will undertake a baseline exercise to define the baseline status prevalent before the initiation of the project activities, particularly in the selected pilot areas. Basic data and information relevant to the project will be collected, and project indicators will be measured at this stage.
3. The M&E system will be designed to offer comprehensive and reliable information to improve planning and decision-making for results-based management. The logical framework will constitute the basis for results-based M&E. The M&E system will have a three-tier structure: (i) output monitoring with focus on physical and financial inputs, activities and outputs; (ii) outcome monitoring assessing the use of outputs and measure benefits at beneficiary and community levels; (iii) impact assessment assessing programme impact for the target group in comparison with objectives. All M&E data, analysis, and reporting will be disaggregated by gender. All M&E activities will be based on IFAD's Guide for Programme M&E.
4. The LDCF intervention will be fully blended with the IFAD baseline operations so they will share the monitoring and evaluation system. The overall responsibility for M&E activities will rest with the Senior M&E Specialist based at the National Programme Coordination Unit (NPCU), and the M&E officers based at the Programme Management Units (PMUs) in the five target governorates. The NPCU Senior M&E Specialist will report to the NPCU Director while PMUs M&E officers will report to PMUs Manager. NPCU Senior M&E Specialist will supervise PMUs M&E officers. NPCU and PMUs M&E Senior specialist/officers will establish a data collection, analysis and reporting system to track physical and financial performance and emerging impact.
5. The programme's logical framework will be reviewed at a Start-up Workshop. At the beginning of implementation a Baseline Survey will be conducted by each PMU in selected locations to assess the physical and socio-economic status of the village-units (VU) and related households and to define their benchmark status. The survey will be undertaken by a contracted service provider and will focus on collecting data related to the selected M&E indicators.

6. **Project Indicators:** The Project team will fine-tune the progress and performance/impact indicators of the project at the Inception Workshop with support from IFAD and project partners. Specific targets for the first year of implementation, progress indicators, and their means of verification will be developed at this workshop. These will be used to assess whether implementation is proceeding at the intended pace and in the right direction and will form part of the Annual Work Plan. Targets and indicators for subsequent years would be defined annually as part of the internal evaluation and planning processes undertaken by the project team.
7. Periodic monitoring of implementation progress will be undertaken by IFAD. This will allow parties to take stock and to troubleshoot any problems pertaining to the project in a timely fashion to ensure smooth implementation of project activities. A part of the participatory M&E will be devoted to ascertain the extent of women's participation in programme activities, constraints faced, benefits gained, aspirations met and impact on women's status in the family, their involvement in community affairs and the climate-proofing of their agriculture.
8. Measurement of impact indicators related to adaptation benefits will occur according to the schedules defined in the Inception Workshop. The measurement of these will be undertaken through subcontracts or retainers with relevant institutions, or through specific studies that are to form part of the projects activities, or periodic sampling.
9. **Reporting.** Harmonized programme progress reports will be produced quarterly, semi-annually, and annually. Reporting progress will be made available for each governorate as well as consolidated for the programme area.
10. Two Mid-Term Reviews will be undertaken in PY3 and PY5 covering: (i) physical and financial progress in comparison with the annual work plans and budgets (AWPB); (ii) performance assessment of service providers; (iii) institutional and national policy changes arising from programme activities; (iv) opportunities for deeper integration of implementation within national systems; and (v) overall progress towards the achievement of programme objectives. At the end of the programme, a Programme Completion Report will be prepared by the Government, with IFAD support, to examine the overall programme performance, taking into account a broader and longer-term perspective.
11. The programme will use locally adapted RIMS (IFAD Results and Impact Management System) surveys at baseline, mid-term and completion, as the main quantitative survey tool to provide information on three levels of results: (1st) project activities and outputs; (2nd) project outcomes, reflecting changes in beneficiaries behaviour, improved performance and sustainability of groups, institutions and infrastructure; (3rd) project impact on child malnutrition and household living standards. Ad hoc surveys, qualitative case studies and thematic reviews will be outsourced to independent institutions to verify results and draw lessons on themes such as climate resilience and adaptation, market access, community empowerment, infrastructure development and food security improvement. The operation and impact of Community Action Plans will be specifically studied.

Learning and Knowledge Management

12. The project's operational experiences will create valuable knowledge in climate resilience and adaptation on natural resources management, crop and livestock production and processing, income diversification, market access, community empowerment, infrastructure development and food security improvement, which will be captured by the NPCU/PMUs and utilized to generate lessons and best practices to be shared with public institutions, the IFAD country teams, partners and others. The results of programme support for developing sustainable community-based development institutions and infrastructure as well as sustainably expanding microfinance operations in rural areas will be widely publicized. Partnerships with IDB, WB and EU operations will be intensified in this respect.
13. The programme will promote: (i) in-country knowledge networking through periodic seminars/workshops; (ii) regional knowledge networking, such as the regional network on Knowledge Access for Rural Inter-connected Areas (KariaNet) for the management and sharing of knowledge, information and experience in agriculture and rural development in the Middle East and North Africa (MENA); and (iii) regional research networks including those supported by IFAD grants. The IFAD country teams will contribute to in-house knowledge sharing and networking. Special emphasis will be placed on knowledge regarding climate change adaptation and disaster-risk development planning. The vulnerability assessment undertaken by IFAD will be used as the baseline, ensuring it guides adaptive long-term planning regarding development work in Yemen. Main anchoring points for knowledge management will be identified, including research institutions, civil society, regional KM networks and specialised service providers.

14. The project will support the preparation of awareness raising printed materials, scientific publications and technical reports that will be available online and as hard copies. Printed copies will be disseminated during field work, conferences, through mailing, etc, and will also be available at the NPCU and PMUs offices and MoAI.

Evaluation

15. Mid-term Evaluation - An independent Mid-Term Evaluation will be undertaken at mid-term of project implementation. This will take the form of a qualitative study to determine the progress being made towards the achievement of outcomes and will identify course correction if needed. It will focus on the effectiveness, efficiency and timeliness of project implementation, highlighting issues requiring decisions and actions, and presenting initial lessons learned about project design, implementation and management. The findings of this review will be incorporated as recommendations for enhanced implementation during the project’s term, including the revision of indicators if needed. The organization, terms of reference and timing of the mid-term evaluation will be decided after consultation between the parties. The Terms of Reference will be prepared by IFAD.

16. Final Evaluation - An independent Final Evaluation will take place three months prior to the terminal tripartite review meeting, and will focus on the same issues as the mid-term evaluation. The final evaluation will also look at impact and sustainability of results, including the contribution to capacity development and the achievement of global environmental goals. The Final Evaluation should also provide recommendations for follow-up activities. The Terms of Reference will be prepared by IFAD.

Table 1. Monitoring and evaluation plan and budget

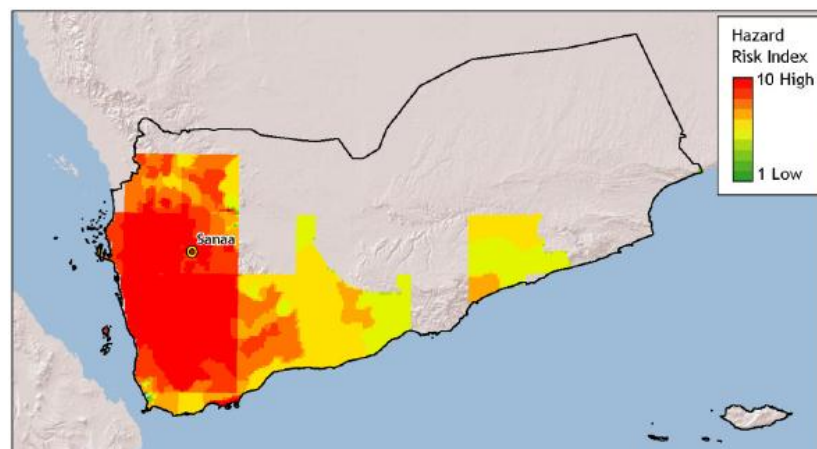
Type of M&E activity	Responsible Parties	Budget US\$ (LDCF contribution) Excluding project team Staff time	Time frame
Inception Workshop (IW) and report	Project Coordinator/ NPCU/PMUs	USD 10,000	Within first two months of project start up
Annual Progress Report (APR) and Project Implementation Report (PIR)	Project Team IFAD		Annually
Tripartite Review (TPR) and TPR report	Steering Committee Project team IFAD		Every year, upon receipt of APR
Steering Committee Meetings	Project Coordinator IFAD		Following Project IW and subsequently at least once a year
Mid-term Evaluations	Project team IFAD External Consultants (i.e. evaluation team)	USD 35,000	At the mid-point of project implementation.
Final External Evaluation	Project team, IFAD External Consultants (i.e. evaluation team)	USD 50,000	At the end of project implementation
Terminal Report	Project team IFAD External Consultant		At least one month before the end of the project

PART II: PROJECT JUSTIFICATION

A. DESCRIBE THE PROJECT RATIONALE AND EXPECTED MEASURABLE ADAPTATION BENEFITS:

17. Recent studies indicate that climate patterns are changing in Yemen: mean annual temperature has increased by about 1.8 °C since 1960 – around 0.39 °C per decade - exceeding the global average rate of increase. Precipitations have been decreasing at a rate of 1.2 mm per month per decade since 1960. The increasing water scarcity is considered – besides substantial population migration – the most critical factor contributing to the abandonment and degradation of the widespread terrace system that characterizes mountain agriculture in Yemen. Many villagers in the target governorates reported not only a severe drought during the last years, but also a reduction in rainfall over the long-term. This trend, together with the mismanagement of water resources has contributed to a dramatic reduction of returns from terrace farming over time .
18. Climate change models unanimously forecast that temperatures will increase across Yemen over the next decades by levels higher than the projected global average: the mean annual T is projected to increase between 1.2 and 3.3 °C by 2060, and between 1.6 and 5.4 °C by 2090. All projections indicate substantial increases in the frequency of days and nights that are considered “hot” in current climate.
19. Although projected changes in annual rainfall significantly differ among the 3 models used in Yemen’s NAPA, in all cases it is expected an increase in rainfall variability, more frequent and intense precipitation events, and more extended droughts, which will reduce water availability during the crops’ growing season. Projected changes in climate are expected to aggravate existing problems facing socio-economic development. The rural population, particularly women and marginal groups, are most vulnerable to climate change given their economic dependency on rain-fed agriculture.
20. Yemen’s NAPA identifies 6 key climate change related issues, which pose significant risk to the livelihood of rural communities - particularly the poor, women and the marginal groups - and will more severely affect the western part of the country (Figure 1):
 - (i) Increased of water scarcity and reduced water quality leading to increased hardship on rural livelihoods (based on current high water consumption for irrigation and water supplies, modelling results predict that groundwater reserves will be exhausted by about 2025-2030);
 - (ii) Increased drought frequency, higher temperatures, and changes in precipitation patterns, leading to devastating flash floods that would further erode soil, destroy crops, buildings and infrastructure and claim lives of unprepared victims in the absence of adequate adaptation measures, as happened in Hadramout in 2008;
 - (iii) Deterioration of habitats and biodiversity, leading to expansion of desertification;
 - (iv) Reduced agriculture productivity, leading to increased food insecurity and reduced income generating activities;
 - (v) Increased sea levels, leading to degradation of wetlands, coastal mangrove migration, erosion, loss of beaches, infrastructure damage, tourism activity loss, and seawater groundwater intrusion;
 - (vi) Increased climate variability, leading to the spread and growth of vector borne and water borne diseases.

Figure 1. Exposure to climate-related flood mortality risk and distribution across Yemen



21. Without appropriate adaptation responses, it is projected that Yemen will endure severe hardship. Over the next 30-40 years climate change is likely to lead to a cumulative reduction in household incomes up to USD 9 billion in Yemen³.
22. According to the SNC, NAPA, and other studies on CC, the expected changes in temperature, precipitation, and extreme weather events will require a wide range of adaptive measures in the management of water, soil and plant resources for agriculture development, including:
- Major reorientation of agricultural development policies and priorities to ensure that the productivity of rainfed agriculture is maximized.
 - Enhance awareness, capacity, technologies and equipment on meteorological observations and CC modelling for crop-specific impact assessments, early warning –drought and floods- and info sharing with local communities.
 - Enhance awareness, capacity and technologies – modern and traditional knowledge - on water use efficiency in irrigation. The implementation of drip irrigation has been identified as the best strategy in terms of water savings and on-farm application of water, followed by conveying irrigation water through closed conduits. In mountain areas, the rehabilitation of stone terraces as well as improved O&M will have demonstrable effects when combined with water harvesting/diverting investments. Considering the severe water scarcity, more strategic water resource management and watershed management plans will be required, taking into consideration the environmental and economic value of water.
 - Recover and improve/adapt the traditional agricultural knowledge and practices, and gain a better understanding of their links to natural ecosystems. Promote on-farm conservation of rainfed crop agrobiodiversity (e.g. genetic diversity of food crops, trees, and livestock races) making use of climate-resilient agriculture systems and technologies (e.g. conservation agriculture, organic agriculture, crop rotation, integrated pest management, adaptation of sowing dates and agriculture calendars, post-harvesting technologies) that improve key environmental services for crop production, such as natural pest-control, pollination, soil stabilization, soil water conservation, flood-control, water-purification, and seed-dispersal services. In addition this could provide female employment opportunities from the management of apiaries and other products.
 - Promote export markets for rainfed crops. Expand traditional crops that have high international demand and export potential and multiple cropping potential – e.g. frankincense and myrrh.
 - Conduct participatory applied research and field demonstration trials to test and fine-tune adaptation technologies and practices for a wide range of better-adapted crop species and varieties (e.g. drought- and salt-tolerant crop species and varieties).
 - Reduce the risk of livestock production and survival due to a more unpredictable rainfall patterns and prolonged drought periods by restoring herbaceous and woody vegetation cover, and adopting area-based livestock management to assess the seasonal carrying capacity of larger areas in terms of sustainable use of water and vegetation. Considering their high dependence on livestock, the rural population, and especially women and landless, will be subject to increased vulnerability and shocks from climate change.
 - Strengthen the resilience of infrastructures to climate-related risk such as flash floods and erosion: (i) restoring and adapting traditional small-scale water-harvesting terrace agriculture, which historically supported coffee plantations but also holds potential for other high value crops such as saffron, grapes, and fruit trees such as apricots; (ii) adopting climate-resilient approaches in road design and construction, especially through road alignment selection away from vulnerable slopes and flood-prone areas and by incorporating improved drainage and slope stabilization measures. The incorporation of water harvesting and livestock drinking water ponds into road drainage structures or the design of road embankments as flood protection structures would also capitalize on multi-functionality of terraces and roads.
 - Enhance awareness and knowhow of all concerned stakeholders (addressing the gender specificities) on CC impacts and adaptation measures through information campaigns, training workshops addressing technical issues, institutional strengthening, and the production of gender-oriented education materials and technical manuals.
 - Strengthen awareness and knowledge of policy-makers to integrate CC considerations into sectoral policies, development planning and budgeting.
23. Adaptation to climate change will require both building resilience to potential negative impacts and taking steps to ensure potential benefits are realized wherever possible. Farmers will have to build their capacity to manage risks from unpredictable and heavier rains, and invest in rainwater harvesting and storage. Smallholders will also need to be made aware of options to adapt agricultural practices to shifting rainfall patterns and higher temperatures, and to shift production of climate-change vulnerable crops towards crops that are more suited to the projected conditions.

³ Verner, Dorte and Clemens Breisinger, eds. (2013) *Economics of Climate Change in the Arab World: Case Studies from the Syrian Arab Republic, Tunisia, and the Republic of Yemen*. Washington, DC: World Bank

24. The rationale behind the proposed LDCF project is to mainstream the CC adaptation priorities of the government into the community-driven and gender-balanced solutions for rural investments, agriculture production and marketing established by previous IFAD programmes and scaled up through the Rural Growth Programme (RGP) baseline interventions. This will help address in a holistic way the major constraints to sustainable rural development in the target areas: (i) weak skills and knowledge of rural population and gender inequalities; (ii) poor production and post-harvesting technologies and infrastructures; (iii) limited access to markets; (iv) limited access to appropriate rural financial services; (v) water scarcity, misuse of the limited water resources, and environmental degradation, and (vi) projected impacts of climate change. A study by IFPRI in 2012 found that IFAD project areas were negatively affected by high food prices and drought. More frequent and severe drought and the increase of food prices due to production reduction will be the key channels of climate change impact on the rural poor. It is therefore essential that major efforts are made now to boost climate resilience by increasing and diversifying incomes and improving natural resource management to secure reliable access to water and improved management of soil and land resources.
25. The project geographic targeting, based on a detailed climate change vulnerability assessment that IFAD undertook during the formulation phase, has prioritized five target governorates, in the western part of the country, with relatively high population density, substantial rural poverty, serious food insecurity, and high climate change vulnerability. The climate change vulnerability assessment has identified in the five governorates a total of 627 vulnerable hotspot areas for one or all climate change-related hazards – flash flooding, soil erosion, changes in cropping potential, and potential for water harvesting in stone terraces. In order to maximize impact at a watershed scale, and avoid geographically scattered interventions, the project's intervention unit will be the "village unit" (VU), averagely composed of 3 to 5 settlements, each having an average of 75 to 100 households (approx. 600 inhabitants per settlement).
26. The proposed project will adopt an integrated approach combining community-based planning for climate-risks reduction, the sustainable use of agro-biodiversity, land and water integrating traditional knowledge and innovative technologies, the restoration of natural resources – rangelands and woody vegetation – and the establishment or rehabilitation/modernization of existing and new infrastructures (e.g. traditional agriculture terraces, water harvesting structures, roads) at a watershed level in the targeted territories. It will mainstream CC adaptation needs into infrastructure designing, spatial planning and agriculture practices and technologies, and help disseminate them among the most vulnerable population living in areas with high CC risk, with a special focus on women and youth. The project would also specifically address the crosscutting elements of climate resilience: the empowerment of local communities and other key stakeholders and institutions through awareness raising, capacity building, education, and research (e.g. CC downscaling modelling and new cropping techniques for better adapted crop species and varieties). The gender focus will be addressed through mainstreaming gender in the project targeting as well as specific gender initiatives such as awareness raising, targeted education and training, institutional development, reducing barriers for women's participation, and promoting women-led micro-enterprises for income generation.
27. As the LDCF project will be a blended project, fully integrated into the IFAD-supported Rural Growth Programme, it will benefit from the synergies generated by sharing resources and structures. This partnership will undoubtedly boost the cost-effectiveness of both interventions, notably because of the joint management structure and M&E framework. Other expected benefits are the improved coordination and communication, the application of common procurement and supervision procedures (reducing costs), and the implementation of complementary project interventions.
28. The proposed LDCF interventions will take advantage and make use of the proven mechanisms for community participation, such as farmer field schools, the training of trainers approach, multi-stakeholder fora, exposure visits, and learning tours to promote debate and cross-fertilization, and to reach a common understanding of needs and solutions. Previous IFAD funded projects have demonstrated that community-driven, area-based development programmes can successfully reduce poverty and food insecurity while empowering targeted rural communities and their women members in particular. Specifically, the IFAD funded community-based projects on rural development, natural resources management and infrastructure construction in Dhamar and Al Dhala governorates are considered to be flagship models for community development. The community organizations established by these projects have given a voice, for the first time, to hundreds of thousands of poor rural women and men, empowering vulnerable groups (particularly the poor and women), helping them to participate in, and gain benefits from the project interventions. Their community-led and gender-balanced extension models are recognized as an effective and sustainable mechanism for crop and livestock services. These projects have addressed a range of development challenges (knowledge and skills, financial services, infrastructure, access to input and output markets, women's empowerment) in parallel with complementary interventions on water supply and improved technologies and farming systems that have created a virtuous cycle and a dynamic rural economy.

29. LDCF funding for Yemen is designed to be catalytic for scaling-up adaptation to climate change. The input of LDCF funding will translate into: (i) more sustainable land management, higher yields and more diversified production through sustainable agriculture systems and techniques and ecosystem-based restoration of rangelands; (ii) improved access to CC adaptation knowhow thanks to the positive impact of targeted technical and institutional capacity development, CC downscaling analysis for selected crops, and the implementation of on-the ground activities, including demonstration trials. The proposed approach to work in the different agro-ecological zones and address the on-going and predicted impacts of climate change and climate variability in each target area will be instrumental for scaling up interventions in the respective zones.

Table 2. Lessons learned from IFAD programmes in Yemen and implications to LDCF project

Project Component	Lessons Learned (IFAD investments)	Implications to LDCF project
Community empowerment and resilience	<ul style="list-style-type: none"> - New community organizations have given a voice, for the first time, to hundreds of thousands of poor rural women and men, empowering and helping them to participate in, and gain benefits from the projects. Relatively high beneficiary contributions from 30% for productive investments to 60% for domestic water schemes demonstrate buy-in from stakeholders. - Gender-balanced extension services established in Dhamar and Al-Dhala governorates have demonstrated to be an effective and sustainable mechanism to improve crop and livestock management. - In Dhamar governorate, about 90% of women's savings and credit groups and 80% of the 1,500 micro-enterprises promoted are still operating after 3 years, generating profits of USD 10-15 per day for their owners (all of whom are women), making them the main earners in their households. - Pioneered contracting methodology engaging communities in road design construction, and maintenance has fostered community ownership, created jobs, and linked remote villages to markets and services. The executing agency (Community Roads Unit-CRU) was mainstreamed into the Ministry of Public Works and Highways, confirming the project's institutional policy impact and sustainability. 	<ul style="list-style-type: none"> - The existing knowledge on value chain issues, and pro-poor agri-business development is a positive asset that shall multiply the chances of success of LDCF. A coherent approach to mainstream CC adaptation needs in agriculture value chain will be brought by the project. - The LDCF project will rely on the existing leading actors, and on-farm learning-by-doing mechanisms set up by IFAD investments that have already provided good results on climate-friendly agriculture practices.
Natural Resources Management	<ul style="list-style-type: none"> - In Dhamar governorate, over 25,000 smallholders have already adopted new technologies, and 20,000 report increased yields; farmers using improved seeds report 33% yield increases, and those using improved beehives report 300-600% yield increases. - In Al Dhala governorate, about 5,000 women and men smallholders benefitted from community-led advisory services focusing on improved technologies (crop varieties, protected horticulture, drip irrigation). - Project's investments in domestic water supply in Al-Dhala are estimated to save women from each household about USD 70 and 300 labour-hours. - IFAD's investments in road construction is generating average cost savings of USD 290/person/yr due to reduced costs of travel and transportation of goods. Road construction positively impacted meat and milk production by 117%, while women's time spent collecting water and wood decreased by 30% (Al-Shahel road data). Trips from villages to the nearest market town have typically reduced in cost by USD 2.5-5.0 each; the costs of transporting wheat, gas cylinders and water have dropped by 50%. 	<ul style="list-style-type: none"> - The LDCF project will bring an opportunity for upgrading and harmonizing sustainable agriculture practices best adapted to the different agro-climatic zones, following international standards for conservation agriculture and organic agriculture. - The LDCF project will benefit from the leading farmers approach to support the role of good practices farm centres in the three agro-climatic zones as clearinghouses for demonstrating and disseminating CC adaptation knowledge to a large number of beneficiaries - LDCF will take advantage of equipment, skills and know how introduced and tested by IFAD investments, and on the favourable environment generated by MSE proliferation. - LDCF will benefit from the successful financial services and products promoted by the baseline in order to facilitate access to climate-resilient equipment for the project beneficiaries.
Climate change downscaling	<ul style="list-style-type: none"> - IFAD has supported robust GIS-modelling analysis to generate climate hazard maps representing the areas that are potentially sensitive to changing patterns of rainfall and temperature, in terms of higher risk for soil erosion, flash floods, and climate constraints for water harvesting and sorghum crop production. - The GOY, with support from different Aid Agencies, has evaluated potential impacts of CC on sector policies, including water and rainfed agriculture. 	<ul style="list-style-type: none"> - LDCF will benefit from previous experiences on CC downscaling in Yemen and will expand the use of successful downscaling methodologies to the analysis of CC impacts to selected crops in the target areas. - LDCF will contribute to capacity development of all concerned actors and institutions to incorporate CC downscaling analysis into policy, community-planning, and agriculture value chains.

Expected adaptation benefits

30. The programme will reduce poverty and food insecurity and increase smallholder climate resilience by stimulating adaptive and sustainable rural economic growth, benefiting a total of about 176,000 households. The key outcomes will be: (i) households and community resilience to shocks enhanced; (ii) infrastructures, crop production, natural resource management, and post-harvesting investments made climate resilient; (iii) improved gender sensitive and climate resilient agricultural practices and productivity; and (iv) rural women and men with increased access to diversified income generation opportunities and markets. The actual numbers of investments and balance of activities will derive from the Community Action Plans (CAPs).
31. Households and community resilience to shocks enhanced: The implementation of Community Action Plans integrating climate adaptation priorities based on vulnerability assessment will enable the 550 target communities to participate in the planning of their own development. Users' associations with responsibility for operation and maintenance of infrastructure for water harvesting, drinking water, land conservation, roads, and renewable energy will be established.
32. Infrastructure and natural resource base made climate resilient: Constructing 275 water harvesting structures within a catchment area of 1,340 ha (13,400 households), developing access to drinking water in 120 village units (38,400 households) and restoring 1,150 ha of abandoned terraces to productive use (11,500 households) as well as climate proofing at least 244km of rural roads.
33. The adoption of renewable energies and the improved access to drinking water will reduce the time and labour spent by women in water and wood collection. Women and children – mainly girls - would benefit in the first place from the water harvesting infrastructures, as they are the ones in charge of water collection, which takes up to 3 hours a day and impacts negatively on girls' school attendance. Reduced workload would also enable women to focus on more productive activities and/or to participate in training and capacity building activities.
34. Improved gender sensitive and climate resilient agricultural practices and productivity: Increased agricultural production due to better access to inputs, more efficient drip irrigation systems and adaptive agronomic practices and technologies on 3,338 ha (33,380 households), improved agriculture diversification through greenhouses for 26,500 households and provision of updated technical assistance by 1,100 VATs (1 male and 1 female in each VU). It is assumed that 70% of farmers and livestock keepers will adopt climate-resilient improvements to their techniques and technologies benefiting 123,200 households through crop yield increases of around 20% for rainfed crops and 30% for irrigated crops on average, improved fodder production and livestock husbandry.
35. The implementation of adaptive agronomic technologies, such as efficient irrigation technologies and conservation agriculture systems, shall increase soil water content and reduce about 30-80% of water requirements for crops. Moreover, soil organic matter, soil texture and soil fertility shall significantly improve at a lower production costs leading to higher and more stable crop yields under climate variability in drought affected years. Water quality shall improved in farmland under CA due to 20-50% lower use of fertilizers and pesticides. Soil erosion shall decrease between 60-90% in restored rangelands, woody vegetation and terraces.
36. Rural women and men with increased access to economic opportunities: Around 66,000 individuals (of whom at least 50% women) will develop or expand income generating activities and micro- and small enterprises using skills gained in literacy, life-skills, business management and technical trainings. 100,000 individuals will benefit from enhanced access to financial resources through Saving and Credit Groups and Associations and later through linkages with microfinance institutions. Construction/rehabilitation of at least 244km of climate-resilient village roads benefiting 150,000 people (c. 700 beneficiaries per km) will reduce transportation costs and travel time, improving access to inputs, school and health facilities, and increasing income due to higher access to markets.

B. DESCRIBE THE CONSISTENCY OF THE PROJECT WITH LDCF/SCCF ELIGIBILITY CRITERIA AND PRIORITIES:

37. In line with the LDCF criteria, the IFAD-supported project was developed in compliance with the principles of country ownership and drivenness. IFAD country team engaged in extensive consultations with the Government (MoPIC, MoAI, MoPWH), aid agencies (EU, WB, UNDP, GIZ, Islamic Development Bank), financial institutions, and local stakeholders to ensure that these principles were fully taken into account. Also, the proposed activities have been identified as priorities for the agriculture sector in the Yemen's NAPA, PPCR, and SNC (see Table 3). Furthermore, GEF and LDCF criteria for project design and financing have been respected. Project management costs represent less than 10% of the total LDCF budget requested and co-financing ratio fulfils LDCF criteria. Finally, the project was developed in coordination with other ongoing and planned IFAD initiatives in the country (RGP baseline project).

Table 3 –NAPA prioritize adaptation measures in Yemen and LDCF project interventions

Sector	NAPA Adaptation Activity	Responses from LDCF Interventions ⁴
Agriculture	<ul style="list-style-type: none"> Rehabilitation and maintenance of mountain terraces and efficient associated watering conduction systems in critical vulnerable areas at the watershed level, and promote suitable crops such as fruit trees with high return 	Output 2.1.2
	<ul style="list-style-type: none"> Restore mountain woodlands and rangelands to stabilize terraces in critical vulnerable areas, reduce soil erosion and peak-flows from intense precipitation events 	Output 2.1.3
	<ul style="list-style-type: none"> Establishment of nurseries to provide adequate cultivars and planting materials for suitable crops, crop varieties, as well as native plant species in forests, woodlands, rangelands, mangroves and sand dunes 	Output 2.1.3
	<ul style="list-style-type: none"> Promotion of research on drought resistant and heat- salinity-tolerant crops and crop varieties 	Output 3.1.3
	<ul style="list-style-type: none"> Promote adaptive crop management programmes taking advantage of farmers' experiences to cope with climate constraints, through changes regarding suitable tillage practices, crop varieties, sowing dates, crop density, fertilize levels, etc. 	Output 2.2.1
	<ul style="list-style-type: none"> Development and implementation of sustainable land management strategies to combat desertification and land degradation 	Output 2.1.2; Output 2.1.3
Water	<ul style="list-style-type: none"> Select and construct the most applicable rainwater harvesting systems through various techniques including traditional methods 	Output 2.1.2
	<ul style="list-style-type: none"> Promote modern and more efficient irrigation saving techniques 	Output 2.2.1
	<ul style="list-style-type: none"> Water conservation through watershed management and reuse of treated waste and grey water 	
Cross-sectoral	<ul style="list-style-type: none"> Implementation of an awareness raising programme on adaptation to the potential impact of climate change on vulnerable sectors 	Output 3.1.2
	<ul style="list-style-type: none"> Development and implementation of programmes to improve Yemen's preparedness to cope with extreme weather events 	Output 2.1.1; Output 3.1.1
	<ul style="list-style-type: none"> Design and implement extension and farmers' training programmes on the proposed adaptive technologies, maintenance and monitoring operations 	Output 1.2.1; Output 1.2.2; Output 1.2.3; Output 3.1.2
	<ul style="list-style-type: none"> Establishment and maintenance of a climate change database 	Output 3.1.1
Coastal	<ul style="list-style-type: none"> Restore a coastal green belt of mangrove forests, palm groves and sand dunes for adaptation to sea level rise 	
	<ul style="list-style-type: none"> Sustainable management of fisheries resources 	
	<ul style="list-style-type: none"> Develop and implement integrated coastal zone management programmes 	

38. LDCF Added Value Compared to the baseline: Although the previous IFAD projects in Yemen provided opportunities in terms of enhancing agricultural production, strengthening community-based planning and contributing to poverty reduction, the impact of climate change was not explicitly taken into account. However many of the development challenges faced in rural areas have their origin in the mismanagement of natural resources, further exacerbated by climate change. The vulnerability assessment undertaken for the design of the LDCF project has identified - based on a detailed modelling of climate change scenarios at the country level - a set of key risks and adaptive measures to guide decision making relevant to project design and execution. Project components and implementation arrangements integrate the findings and recommendations of this assessment to ensure that climate change adaptation priorities are mainstreamed and contribute to disaster-risk reduction, set priorities for wise long-term investments and increase the resilience of target communities.

⁴ See Annex A – Project Logframe

39. The LDCF project will help IFAD address the governmental priorities for CC adaptation in the agriculture sector, supporting community adaptation planning processes at the watershed level, and incorporating climate-resilient investment measures and adaptation criteria in small agro-business planning and decision-making, with a special focus on women and youth. The project will raise awareness and build capacity among policy-makers, researchers, extension agents, and local stakeholders, through modelling CC adaptation, co-learning and on-farm demonstrations led by farmers and applied research to help individuals and community organizations plan, test and validate alternative water harvesting systems, rangeland and cropping management systems, climate adapted crop varieties, land management practices, and disaster reduction measures that better cope with climate risks, while increasing yields and enhancing the agro-ecosystem's diversification and resilience.
40. In addition to the adaptation benefits required under the LDCF, the project will contribute a number of other environmental co-benefits at the local to global levels. Notably, any improvement in agriculture land management will protect below ground carbon stores, contributing to climate change mitigation. The use of reduced/no till, agriculture residues as mulching and crop rotation will significantly improve soil carbon stocks and reduce CO2 emissions to the atmosphere. This will furthermore protect biodiversity in agro-forestry ecosystems, and reduce the risk of desertification.
41. The LDCF project is fully aligned with the CC Strategy of IFAD that aims to maximize impact on rural poverty in a changing climate through: (i) innovative approaches helping smallholder producers build their resilience to CC; (ii) availability of incentives and funding for smallholder farmers to shift to climate-resilient production systems; (iii) an informed and more coherent dialogue on CC, rural development, agriculture and food security. Through the LDCF project climate change will be factored into IFAD's operating model in Yemen, incorporating climate resilience of the rural poor in the overall goal of the RGP baseline. LDCF is also consistent with all three strategic objectives of the 2008-2013 COSOP, namely to (i) empower rural communities, (ii) promote sustainable rural financial services and SMEs, and (iii) enhance food security of poor households.
42. **Consistency of the project with national/regional priorities/plans:** The government of Yemen recognizes that climate change is a major challenge for agriculture development, economic growth and the achievement of the Millennium Development Goals in the country. Climate change concerns have been flagged in the 4th National Plan for Development and Poverty Reduction (DPPR 2011-2015) and the Joint Social and Economic Assessment for the Republic of Yemen (2012-2015). The use of resilient agriculture systems and technologies for more stable and higher yields and diversified crop production will represent a major contribution to climate change adaptation, responding to a number of priority measures and recommendations proposed by the SNC and NAPA (see Table 3).
43. LDCF is aligned with the priorities of the Transition Plan for Stabilisation and Development 2012–2014, the Development Plan for Poverty Reduction 2012-2015⁵, the climate change adaptation priorities identified in Yemen's National Adaptation Plan of Action (NAPA)⁶, the National Water Sector Strategy and Investment Program and the transitional MoPIC National Food Security Strategy, as well as with the Joint UN Framework to Support the Transition in Yemen which aims to provide an immediate, concerted and multi-dimensional response consistent with and complementary to existing humanitarian and development plans. Importantly it responds directly to the Gulf Cooperation Council (GCC) Agreement's call for '*establishing and implementing an initial programme of economic stabilization and development and addressing the immediate needs of the population in all regions of Yemen*'. Support for community-level institutions will ensure that they are effectively integrated within existing district and governorate administrative structures for sustainability and impact.
44. In line with the climate change policy objectives of the government, the LDCF proposed CC adaptation measures will also incorporate CC mitigation potential – i.e. it is expected a reduction in organic soil losses as a result of terrace rehabilitation and sustainable agriculture practices; rangeland and woody vegetation restoration will also contribute to C sequestration.

C. OUTLINE THE COORDINATION WITH OTHER RELATED INITIATIVES:

45. The project will be country-driven, is developed in compliance with relevant policy documents addressing CC adaptation in Yemen, and will support the implementation of national priorities identified in the DPPR 2011-2015, the SNC, the National Strategy for CC Resilience, and the priority projects included in the 2009 NAPA.
46. The fully blended RGP/LDCF will develop financial partnerships with the Islamic Development Bank for the water harvesting project component, with the European Union for the road construction or rehabilitation and

⁵ Priorities of the DPPR 2012 – 2015: (i) stimulating economic growth and reducing unemployment; (ii) strengthening social protection; (iii) accelerating progress on the MDGs; and (iv) enhancing governance.

⁶ NAPA priorities include rainwater harvesting, water conservation, awareness raising and improved land management amongst its priority adaptation activities.

ecosystem restoration (wadi bank protection), and the Microfinance Institutions, which will mainly finance income generating activities, and will extend refinancing loans to savings and credits groups/associations.

47. Technical partnerships will be developed with several public and private institutions such as: the Adult Literacy Organization and other specialized NGOs (yet to be determined) for women’s empowerment activities; the World Bank-supported Public Work Programme which will implement activities related to drinking and irrigation water; the Agriculture Research Extension Authority and Range Forestry department for soil conservation activities, training of village agriculture technicians, and research and development of alternative and new climate resilient crops; Small and Medium Enterprises Promotion Services, USAID and UNDP for agriculture production diversification and notably linkages with greenhouses producers, nurseries, and training of programme-supported greenhouses beneficiaries, as well as GIZ for the development of adequate financial products for agriculture.
48. The project will complement adaptation to climate change initiatives supported by other donors. As an example, the IFAD/LDCF initiative would complement the GEF/SPA funded project “Adaptation to Climate Change Using Agro-biodiversity Resources in the Rainfed Highlands of Yemen” under the leadership of the World Bank. This project has been developed taking into account the indications contained in the Yemeni NAPA, but does not support directly the implementation of the NAPA project profiles. The IFAD/GEF project would complement in particular the WB/GEF component aiming at documenting and disseminating local knowledge on the traditional farming system by including also local and traditional knowledge on water management.
49. Other relevant development initiatives focusing on water resources are the Social Fund for Development aiming at providing communities with infrastructures; the Public Works Project (PWP) established in 1996 to alleviate the negative impact of the structural reform program on the most vulnerable population; the Rural Water Supply and Sanitation Project (RWSSP); the General Authority for Rural Water Supply Projects (GARWS); the Groundwater and Soil Conservation Project (GWSCP). Also, the proposed IFAD/LDCF intervention is in line with the framework of the MENARID regional networking programme and would contribute at feeding, while at the same time learning from, the knowledge sharing mechanism included in the programme. Finally, the objectives of the project are aligned with the indications provided by the UNFCCC Bali Action Plan under the Adaptation pillar.

D. DESCRIBE ADDITIONAL COST REASONING:

50. IFAD has undertaken a financial analysis to: (i) assess the financial viability of the improved technologies and systems promoted by the project and (ii) evaluate the impact of the project’s interventions on the cash flow and household incomes of the farmers involved. For the purpose of the analysis several models have been prepared, including wheat, sorghum (grain and fodder), tomatoes (open air and greenhouse), bananas, potatoes, coffee (new plantation), and lentil. The “without” project situation represents crops with insufficient irrigation or rainfed; the “with” project models illustrate the impact of efficient irrigation technologies and climate-resilient soil and water conservation techniques on crop yields.
51. Summary of crop budgets, and underlying technical assumptions on which these models are based, are presented in the table 4 below. These budgets indicate that yields are expected to increase by 30% for most irrigated crops and 20% for rainfed crops. Yields of the major crops are projected to increase under irrigated and rainfed conditions compared to the “without” project situation due to increased and more secured water availability, more balanced use of fertilizer and improved farming practices. For rainfed crops, these increases are lower than for irrigated crops because of more limited potential for productivity increases in dryland farming conditions. In addition to the on-farm irrigation systems, the project will provide training to farmers on crop water requirements, irrigation schedule calculations and establishment of WUAs.

Table 4. Financial crops budgets summary

Financial crops budgets summary					
Crops	Unit	Yields		Incremental net benefits (YER)	Incremental net benefits (US\$)
		Without project	With project		
Wheat (1ha)	kg	1,800	2,430	89,119	416
Sorghum grain (irrigated), 1 ha	kg	2,500	3,375	236,688	1,106
Sorghum fodder (irrigated), 1 t	ton	10	13.5	93,278	436
Sorghum fodder (rainfed), 1 t	ton	9	11	57,636	269
Potatoes (1 ha)	kg	6,000	8,100	273,750	1,279
Tomatoes (1ha)	kg	3,000	4,050	273,000	1,276
Lentils	kg	700	840	39,000	182
Bananas (existing plantation)	ton	8	11	268,666	1,255
Coffee new plantation	kg	0	2,500	2,224,495	10,395

52. Models illustrate the likely returns over time to smallholders participating in this programme and adopting improved husbandry practices (hygiene, vaccination and supplementary feed) as well as having better access to irrigation infrastructure and animal watering, and restored rangelands. The existing animal husbandry practices limit the milk and meat yields keeping them below the potential. Low animal productivity and profitability of livestock production is mainly due to inappropriate livestock feeding practices, limited availability of clean drinking water and degradation of rangelands. The main challenge smallholder farmers are facing in the project area is to optimize the benefits of mixed farming (crop and livestock production together) by using productivity enhancing technologies and rangeland rehabilitation practices.
53. Rehabilitated pastures are meant to provide richer and more secure fodder for the livestock, particularly in times of droughts. Each rangeland unit spreads over 2 ha and would be closed off for resting during a period of about a year, then reopened for controlled grazing. Each area would have a water reservoir for livestock with a capacity of about 200 m³ that would be sufficient for 14 family livestock units or 206 animals. Rangeland is opened to pasture and used during the dry season. It was conservatively estimated that the meat and milk production could increase by a minimum of 10% over time following substantially better water supply and from adoption of improved feeding regime. The model shows incremental net benefit (with the project) by year 4 of 12,298 YER (58 US\$) per family and per year. Incremental net benefit is derived from the production of additional milk and meat.
54. From experience of the previous projects, the main opportunities identified by farmers to diversify their sources of income are coffee production, bee-keeping, sheep fattening or, of farm, garment production and carpentry. With the high premium price paid for local honey, beekeeping is an attractive income generating activity (IGA). Beekeeping model illustrate the establishment of new more productive beehives. Investment cost (50% paid by beneficiary) will include beehives and colony, queen screen as well as some basic equipment (face nets, smoker, brush and feeding equipment). Honey production would increase from the initial level of 5kg per year to 20 kg per year, resulting in a short pay-back period for the investment cost.

E. INDICATE THE RISK THAT MIGHT PREVENT THE PROJECT OBJECTIVE(S) FROM BEING ACHIEVED AND OUTLINE RISK MITIGATION MEASURES:

55. Policy documents addressing CC impacts and adaptation needs in the agriculture sector, recognize the limited awareness and capacity (technical, institutional and financial) of all concerned stakeholders - from the national to the local level - to adequately assess impacts, plan and implement CC adaptation and mitigation actions. This constraints needs to be seriously addressed, as experience shows that when knowledge on adaptive agriculture systems and technologies is not properly introduced and adjusted to local contexts, the level of acceptance from farmers is very low and can eventually jeopardize a successful shift to sustainable cropping systems. The LDCF will pay adequate attention to awareness raising, institutional strengthening and training as key factors to overcome this risk. The project will engage in a permanent knowledge generation process, aimed at nurturing a critical mass of VATs, and the sharing of practical experience among stakeholders, through a continuous on-farm learning process to test and adapt sustainable agronomic principles and technologies to the local context and minimize risks associated with predicted CC impacts.
56. The programme's risks have been assessed and mitigated in the design. Residual risk is moderate or exogenous. The programme's design draws lessons from ongoing IFAD investments in Yemen, as well as those of other financiers and partners. The project's to be scaled up (ADCRMP, DPRDP, and CBRIP) were amongst the few projects to successfully continue implementation during the crisis. This was due to the facts that insecurity was mainly in urban areas and the project's themselves actually contributed to improving security in their project areas.

Table 5. Risks and Mitigation Measures

Risks	Possible consequences	Mitigation Measures
Security risk. UNDSS security levels in Yemen: 2 (low) to 5 (high).	Poor security conditions may adversely affect the fully blended RGP/LDCF implementation.	Previous programmes have continued to operate despite difficult security conditions. Expansion will be highly flexible in compliance with security issues.
Political instability	May inhibit Government decision-making and slow implementation.	Arrangements which increase ability to continue programme implementation during periods of political crisis include: (i) decentralized PMUs with full autonomy, accountability and

Risks	Possible consequences	Mitigation Measures
		independence which are not embedded within public organizations; (ii) extensive use of private sector service providers and community contracting, and (iii) investment activities in rural areas.
Governance weaknesses	May prevent the public sector from managing and executing the programme.	PMUs operate on private sector principles and aim to develop a network of local private service providers.
Weak capacity of service providers.	Will have adverse effects on implementation, and on programme- supported enterprise performance.	Ongoing projects make extensive use of service providers who have proven their capacity. RGP will regularly assess quality of services through focus group discussion with beneficiaries. Contracts renewed subject to positive assessment.
Flow of funds delays (delayed transfers of funds to NPCU/PMUs)	Will have adverse implications for implementation and credibility with partners.	The project implementation manual (PIM) will describe flow of funds in detail. PMUs will receive 3 months advances and subsequent advance when at least 75% of previous advance accounted.
Fiduciary management risk	May lead to financial, procurement and contract management weaknesses.	Fiduciary risk mitigation measures have been incorporated in the baseline RGP.
Weather-related production risk	Impact of climate change could negatively affect agricultural activities and income of smallholders	Vulnerability assessment will guide programme interventions; research on drought tolerant crops will be scaled-up; resilient infrastructure will support disaster-risk reduction; ecosystem/terraces rehabilitation measures and efficient irrigation and climate-resilient farming technologies will improve NRM and production. Capacity building on climate adaptation will reduce vulnerability.

F. DESCRIBE HOW COST-EFFECTIVENESS IS REFLECTED IN THE PROJECT DESIGN:

57. The project is mainly investment-oriented with a view to maximize the impact per GEF dollar. Project management and M&E costs are maintained at the lowest possible level. Investments in a sector that is significantly affected by drought, soil degradation and climate change through well targeted innovative technologies to help farmers swift from conventional agriculture to climate-resilient farming, from excessive use of limited water resources to efficient water harvesting and irrigation, and from degraded natural vegetation to healthy rangelands and woody vegetation, would lead to increased cost-effectiveness. Reduced cost in relation to smallholders' entrepreneurship development, access to rural finance, and technical assistance and capacity development for current and new value chains (due to the blended nature of RGP and LDCF) will further reduce the share of "soft activities", leading to stronger investment and higher return. Cost-effectiveness will be further analyzed during project inception and implementation. The project proposal has been developed with the aim to ensure cost-effectiveness and sustainability also after the project completion. In spite of costs for adopting new equipment, climate-resilient farming systems allows for a highly efficient performance, as it provides a more effective water infiltration and greater soil moisture-holding capacity the help minimize the effects of drought and run-off erosion, helps reduce the impact of soil extreme temperatures in crops, and improves soil health conditions resulting in higher yields and crop diversification with a positive effect in food security. Operational and maintenance costs are low, due to estimated 20-50% lower fertilizer and pesticides use, and significant reduction in machinery and labour requirement.

58. The project was designed according to a watershed approach that enabled to identify and address upstream/downstream links, looking at the actual and future disruptions caused by climate change in vulnerable areas at the watershed level (based on a CC vulnerability analysis undertaken as part of the GEF project formulation). In practice, the participatory process adopted to identify objectives and activities took into account the impact that project investments upstream would have on downstream communities, selecting only those actions that would bring advantages and create synergies among all beneficiaries. For instance, the decision of how and where to restore the vegetation in sensitive areas in the upper watersheds would be taken by

involving, and seeking the consensus of all communities, raising awareness on the fact that restored grasslands and woodland cover will benefit upstream beneficiaries by making available more fodder, fuel-wood and forest by-products, while it will positively impact downstream users by increasing water availability and decreasing the risk of erosion and soil degradation in the lower areas.

59. In order to further insure the adequacy of the participatory process, the project will support the development of community adaptation plans at the watershed scale, with the active participation of all beneficiaries. The project will create community development associations and village agriculture technicians, and will train them on CC adaptation and NRM, thereby ensuring that the communities have the capacity to conceive, formulate, and put in practice those adaptation investments that are more suitable to their needs and the specificities of their areas.
60. The design has also taken into account the high vulnerability of women in the project communities, and included measures to ensure that women are a priority target of capacity building measures, hold a representative share in decision-making processes, and are granted adequate means for the set up of small-scale enterprises and income generating initiatives.
61. Finally, all project investments in terms of climate-resilient infrastructure, equipment and technologies will follow cross-compliance criteria to ensure coherence and compatibility, and the adaptation technologies adopted will combine the achievement of environmental resilience (e.g. efficient use of irrigation water; soil and water conservation technologies enhancing soil water content, soil carbon storage and soil fertility) with the enhancement of the social and economic resilience (e.g. reduced labour requirements to allow time for other household activities; reduced energy requirements and production costs) of all target beneficiaries. Project stakeholders will be enabled to undertake CC downscaling analysis for selected crops to support decision-making about the most suitable adaptation measures and technologies to be tested in on-farm research trials and adopted by project beneficiaries.
62. Cost-effectiveness of the project, including the cost-effectiveness of the project design approach has been demonstrated through economic and financial analysis to: (i) assess the financial viability of the improved technologies and systems promoted by the programme and (ii) evaluate the impact of the programme's interventions on the cash flow and household incomes of the farmers involved. Agricultural products considered in the analysis are the most popular for the programme area and those identified as suitable by the vulnerability assessment. In total several illustrative crop models and were prepared to illustrate the impact of the potential investments on effectiveness. These models illustrate the impact of the adoption of better irrigation practices on the production yields. Wheat and sorghum models have been used as proxy for cereals and tomato and potato model as a proxy for vegetable crops being grown both in rain feed and irrigated systems. Incremental revenue is derived from increased water availability and improved irrigation techniques.
63. The analysis attempted to identify cost-effectiveness and quantifiable benefits related to the activities undertaken following the implementation of the components of the programme. The incremental quantifiable benefit stream comprises following elements: (i) Integrated water management and soil conservation investments; (ii) Integrated rangeland and woody vegetation restoration plans; (iii) Agriculture production and diversification; (iv) land rehabilitation and productive use of rehabilitated land; (v) benefits from agricultural roads design to capture water.
64. In addition to that, Non-quantified Benefits that the project is expected to generate in terms of capacity building and empowerment of the poor communities (especially women and youth) were also factored in. In particular, the following benefits will be important:
 - Implementation of Community Action Plans enabling communities to participate in the planning of their own development;
 - Users' associations invested with the responsibility of operating and maintaining infrastructure such as water harvesting infrastructure, drinking water schemes, rehabilitated land and roads;
 - Trainings contributing to community empowerment, particularly for women and youth;
 - Institutional strengthening of the communities, coupled with training in irrigation practice and adoption of participatory approaches for vulnerability reduction.
65. Estimating the programme's cost-effectiveness was translated in the form of the Economic Internal Rate of Return (EIRR). The analysis included the programme base costs with their physical contingencies. The costs include all investments for all programme components and recurrent costs (mainly operation and maintenance for transportation, equipment and materials).
66. After modeling the analysis, it was found that the base case Economic Internal Rate of Return (EIRR) is estimated at 15%, which is considered quite high for such projects. Cost-effectiveness during implementation

will be further refined through the conduction of a baseline study, and undertaking the same analysis to calculate effectiveness of the different interventions compared to the baseline.

67. **Sustainability:** The sustainability of project interventions is ensured by the integration of lessons learned during implementation of projects being scaled-up, particularly with regard to: (i) empowering communities to drive planning, implementation and monitoring and evaluation to the extent feasible; (ii) ensuring sustainability of infrastructure investments through effective mobilization, training and regular follow-up of user associations by specialized field staff with a deep understanding of communities in which they work and extensive training in conflict resolution; (iii) linking saving and credit groups to microfinance institutions; and (iv) providing incentives to service providers to improve the quality of services offered to clients through performance-based contracting and supporting private agricultural and livestock extension providers (VATs). The climate financing and integration of adaptive planning will ensure that investments are more sustainable and contribute to vulnerability reduction.
68. Long-term sustainability will be sought through a broad and deep CB programme, designed to create a critical mass of knowledgeable and skilled experts on CC adaptation for agriculture development at the national level, and among all actors – from institutional to grassroots. The training of trainers will be a key component of this programme. The CB process will integrate strong participatory elements to fully address issues that affect the long-term sustainability of natural resources and the welfare of local communities (continuous training and on-farm demonstrations to adapt climate-resilient practices and technologies, and encourage adoption by project beneficiaries and other farmers in the target governorates). The proposed approach to work in different agro-ecological zones and address the on-going and predicted impacts of climate change and climate variability for selected crops in each zone will be instrumental for scaling up interventions in the respective zones.
69. **Exit Strategy:** Accelerating the process of decentralization, including of agricultural and other services, will be a major priority of the Transitional Government. Strengthening of Governorate, District and *uzla* level capacity for planning and implementation of development projects will be essential to its success. The focus of the LDCF exit strategy is capacity building of Government structures and agencies at Governorate and district level through their close involvement as implementing partners in the programme and their involvement in steering committees.
70. Decentralized PMUs tying up relationships with the governorate-level network of local administration, SMEs, service providers, and producers' associations have proven to facilitate the maximization of projects impact and benefits to a wider population than the strict project target. Therefore, to ensure sustainability and ownership by the local population and continuity of activities after project completion the PMUs will be increasingly integrated within the Governorate and District level structures. The Project Mid-term review will assess feasible options for this integration, based on the outcomes of the ongoing National Dialogue and transition process and its impact on the decentralization process.
71. Legal registration of Community Development Associations (CDAs) under the Civil Associations Law gives community associations the greatest capacity to act effectively to support development in their communities by allowing them to engage with and accept funding directly from any local official entity, non-official entity, or foreign entity.

PART III: INSTITUTIONAL COORDINATION AND SUPPORT

A. PROJECT IMPLEMENTATION ARRANGEMENT:

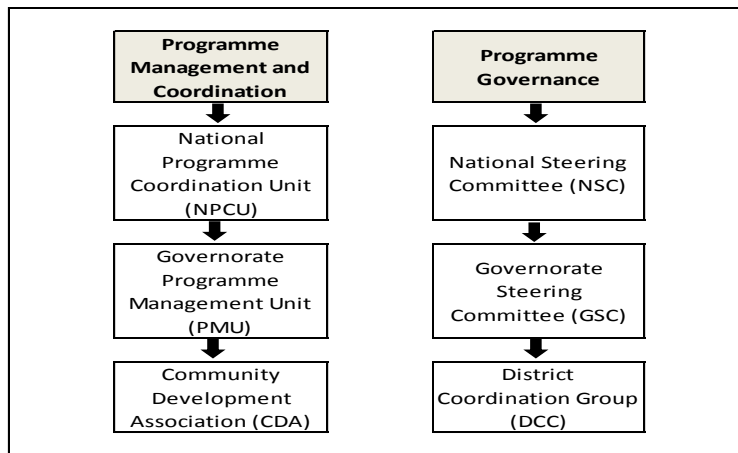
Project coordination and supervision

72. The LDCF project will be fully integrated within the institutional arrangements of the project baseline: the Rural Growth Programme. A National Programme Coordination Unit (NPCU) located in Sana'a – hosted by AFPPF and reporting to the MoAI - will provide overall coordination at national level, and will be responsible for day-to-day management and implementation of the IFAD baseline Rural Growth Programme in the country. The NPCU will include the following positions: (i) Programme Director; (ii) Finance Manager; (iii) Internal Auditor; (iv) Consolidation accountant; (v) Senior M&E and KM specialist; (vi) Senior Procurement Officer; (vii) Environment and Climate-Change Specialist; (viii) Business Management/Rural Finance specialist; (ix) Secretary, and (x) support staff.
73. Programme Management Units (PMUs) will operate in each governorate, with the main role to mobilize and manage relationships with target communities, provide technical support, build the capacity of the local administration and community organizations, and take care of procurement and supervision of service

providers. PMUs will coordinate closely with the Governorate, District and Uzla administration to ensure that planning at VU-level feeds into District and Governorate development plans. Each PMU will be headed by a Programme Manager (PM) with expertise in agriculture/rural development and staffed with a small team of professionals: (i) an Accountant; (ii) a Procurement Officer; (iii) an M&E Officer; (iv) a Rural Engineer; (v) a Gender and Community Development Officer, (vi) two Field Managers (FMs); (vii) two community facilitators (CFs). In addition, support staff (secretary, drivers and guards) will be recruited. The FMs and CFs (both, one man and one woman) will be based in selected VUs, with the main roles to mobilize communities, assist the registration of CDA, build capacity of CDA members, and provide support to develop the CAP. National providers of consultancy services will be hired at PMU level to support the implementation of the LDCF interventions.

74. Appropriate service providers, selected through a competitive process, will be hired to undertake research, implement works, and provide training, technical support and coaching to community members, community organizations and micro-enterprises. Where possible, a single service provider will be selected in each governorate for each type of training to be delivered.

Figure 2. Programme Management, Coordination and Governance



75. All staff members will be recruited on a competitive basis in compliance with IFAD’s procurement guidelines and the Yemeni labour law. The LDCF project will fully finance the position of Environment and Climate-Change Specialist (ECS), based at the NPCU. The ECS will have responsibility for coordination of the implementation and monitoring of the LDCF project components under the supervision of the NPCU Programme Director. The ECS will have the responsibility to generate draft annual work plans and budgets for the LDCF, including among other things a detail description of planned activities during the coming year, the source and use of funds, and a procurement plan. The draft annual work plans will be submitted to the National Steering Committee (NSC) for review and approval. The ECS will also provide the necessary information to the NPCU Programme Director to complete the six-monthly and annual progress reports in English to be submitted to IFAD and GEF with the essential information on the progress and impact of the project activities. National technical assistance (NTA) will be hired at the PMU level to support the work of the ECS, providing assistance in the planning, implementation and monitoring of the project in the five target regions. The NTA will have a special role in the implementation of the capacity building component and the field demonstration activities requiring substantial field visits for technical assistance and supervision. The PMUs staff – M&E Officers, Gender Officer, Rural Engineer, Field Managers and Community Facilitators - will assist the ECS and will ensure that the overall LDCF project M&E system is in place and operational, supporting the collection of M&E data and the preparation of reports in accordance with the annual work plans and GEF/IFAD requirements, and in full integration with the existing NPCU-IFAD M&E system.

76. The programme’s governance will be threefold: (i) District Coordination Groups; (ii) Governorate Steering Committees; and (iii) a National Steering Committee.

77. **District Coordination Groups.** Located in each target district and headed by the General Secretary of the District Council, they will also include: (i) executive members of the Local District Council; (ii) the President of each Community Development Association supported by the Programme in the district; (iii) the PMU Gender and Community Development Specialist, and (iv) two community facilitators (one man and one woman). The main responsibilities of each District Coordination Group will include the review of CAPs, the coordination between stakeholders and local partners from the public and private sectors, and conflict resolution matters.

78. **Governorate Steering Committees.** Governorate Steering Committees (GSCs) will be established, chaired by the Governor. They will also include: the General Secretary of the Local Council; the General Manager of the Agriculture and Fisheries Department of the MoPIC; the General Manager of the Loan and Grant Department of

the MoF (in charge of loans and credits); the General Manager of the Planning Department; the General Manager of the Women Development Department and the General Manager of the Project Department of the MoAI; the Agriculture and Irrigation Office Manager, and the PMU Manager. The main responsibilities of each GSC will include: provide guidance to the PMU, approve Annual Work Plan and Budget, ensure coordination among all stakeholders, and with the Governorate development plans, review progress reports and performance of programme's activities, and resolve any implementation matters.

79. **National Steering Committee.** A National Steering Committee (NSC) will be established at Sana'a and chaired by the Minister of Agriculture and Irrigation. Its members will include the Deputy Minister of each line ministry (MoPIC; MoAI; MoF; MoPW, and MoLA) and each PMU Manager. Its major roles will be: provide strategic and policy guidance for programme implementation, approve the overall AWPB, recruit the audit firm and approve its report, review the recruitment process and endorse selection of PMU Managers and key staff, review progress reports and performance, and resolve implementation problems not resolved at lower levels.
80. A **project implementation manual** will be prepared as part of the project start-up activities, to assist the Project team with guidance for planning, implementing and monitoring the project activities, the procurement of technical assistance and services, and the project investments. The project implementation manual will follow the same conditions of IFAD's operations in Yemen. The manual will define procedures, criteria and procurement conditions for the project matching grants, addressing climate resilience and gender requirements. Grant funding will facilitate the generation and introduction of innovative technologies and will support the delivery of environmental services.
81. Grant funding will be provided through a competitive scheme for applications focused on capital investments in equipment and technologies that are aligned with the project objective and outcomes, which demonstrate potential to contribute to improvements in agriculture production and farmland quality through climate-resilient technologies. In order to be eligible for Grant funding support, individual farmers and community organisations will have to fulfil specific criteria as defined in the project Implementation Manual (IM). NPCU will prepare ToRs and conditions for applicants that will be published in local mass media and online. Following IFAD's approach, the applications submitted may follow a two-step selection process of pre-qualification and qualification through a field review and final scoring by an Application Evaluation Committee (AEC). All the goods shall be procured through National Competitive Bidding (NCB). Grant applicants may provide a 1:1 match. After the purchase of the goods a transfer agreement will be signed, where applicants will commit to the good maintenance of the equipment and its use during the project timeframe for the specific project objectives and outputs.
82. All international and national providers of services will have to apply for competition by fulfilling specific criteria defined in the IM. The Quality and Cost-based Selection (QCBS) procedures will be used for procuring these consulting services.
83. **Supervision.** The project will be directly supervised by IFAD. Direct supervision is perceived and will be applied as a continuous process that requires ongoing communication and engagement with Government and NPCU/PMUs management. Direct supervision will encompass three areas: (i) finance administration, ensuring fiduciary compliance, with focus on legal conditions, financial management and disbursements, and procurement and contracting; (ii) programme supervision, assessing implementation performance, with focus on overall implementation performance and progress towards objectives, programme investments, activities and outputs, statutory requirements (AWPB, monitoring, reporting), steering, management, implementing institutions, targeting and gender mainstreaming; and (iii) implementation support.
84. Implementation support will be applied at three levels: (i) programme level: with focus on providing guidance towards achievement of objectives, supporting adaptation in response to evolving conditions, creating systems for sustainable flow of benefits, resolving operational issues and problems, generating lessons and articulating best practices; (ii) country level: with focus on introducing a broad programmatic view of development investments, influencing policy on the basis of operational experiences, developing systems and institutions for poverty reduction, facilitating financial and operational partnerships; and (iii) IFAD level: with focus on generating knowledge and lessons, feeding operational lessons into new programme design, creating innovative instruments, investments, pilot activities, and enabling portfolio restructuring to improve outcomes and results.
85. Programme design will invariably be superseded by reality over time, as a result of changing conditions, emerging operational experiences, political and macro-economic changes, exogenous developments and force majeure. The supervision process will guide the programme towards the achievement of strategic objectives and broader poverty reduction outcomes, while ensuring fiduciary compliance and responsiveness to the accountability framework.
86. Supervision missions will be undertaken annually and complemented by short and focused follow-up missions as appropriate. The frequency and composition of supervision missions will be determined in light of actual requirements.

PART IV: EXPLAIN THE ALIGNMENT OF PROJECT DESIGN WITH THE ORIGINAL PIF:

87. The project is fully aligned with the original PIF. However, some minor adjustments were made in terms of co-financing to reflect a more accurate estimation of secured co-financing sources. Although secured co-financing is slightly lower than at the PIF phase, IFAD has significantly advanced in negotiations with EU and others for further co-funding of the programme.

PART V: AGENCY(IES) CERTIFICATION

This request has been prepared in accordance with GEF policies and procedures and meets the LDCF/SCCF criteria for CEO Endorsement.

Agency Coordinator, Agency name	Signature	Date (Month, day, year)	Project Contact Person	Telephone	Email Address
John McIntire Associated Vice President, Programme Management Department IFAD		20 August 2014	Rami Abu Salman, Regional Climate and Environment Specialist, Environment and Climate Division IFAD	+39 06 5459 2291	r.salman@ifad.org

ANNEX A: PROJECT RESULTS FRAMEWORK

LDCF Project – Rural Adaptation in Yemen
RESULTS FRAMEWORK (PROJECT LOGFRAME)

Output	Key Indicators	Means of Verification	Assumptions and Risks
<p>LDCF Goal</p> <p>Enhanced resilience and adaptation to climate change in rural Yemen</p>	<ul style="list-style-type: none"> • Trends in integrity and degree of resilience of agriculture and rangeland systems in 550 Village Units • 800,000 poor rural people/120,000 poor households increased climate resilience • 50% reduction in average length of hungry period amongst beneficiaries 	<ul style="list-style-type: none"> - Project M&E system - Assessments of soil and water conservation, and crop production at mid-term and project completion - Household income and expenditure surveys 	<p>Political and economic stability in the country</p> <p>Adequate knowledge, tools, and equipment available</p> <p>Commitment of all concerned actors</p>
<p>LDCF Objective</p> <p>Improve farmland and rangeland productivity, and soil and water conservation through the rehabilitation and sustainable management of climate-proof agriculture.</p>	<ul style="list-style-type: none"> • Water harvesting and storage capacity increased by 30% • 1220 ha of agricultural land rehabilitated and back in production • 3338 ha equipped with drip irrigation • At least 70% of poor smallholders in each target area adopt resilient agriculture practices and technologies by project completion (disaggregated by gender and age). 	<ul style="list-style-type: none"> - Project M&E system - Progress reports, mid-term and final evaluations - Contracts and agreements - Publications and other awareness and training tools - Feedback from users and stakeholders 	<p>Concerned Ministries, local institutions, and private landowners are strongly committed to project objectives</p> <p>Appropriate technology and means available in a timely fashion</p> <p>The political situation and intra-community conflicts do not prevent project implementation</p>
<p>Component 1. Community Empowerment and Resilience / Contributes to CCA-3</p> <p>Total GEF Budget: USD 1,375,000</p>			
<p>Outcome 1.1. Community Development Associations in the project Village Units (VUs) empowered on adaptive management of natural resources, with a focus on climate-smart water and soil conservation</p>	<ul style="list-style-type: none"> • At least 50% of CDAs with medium-term climate resilient CAPs reviewing them annually 	<ul style="list-style-type: none"> - CDA reports - Field staff reports - CAPs documents and maps - Programme administrative records 	<p>The PMUs have the capacity to secure the expertise needed for the CB process</p> <p>Target beneficiaries are willing to form CDAs</p> <p>Intra-community conflicts prevent the effectiveness of CB processes</p>
<p>Output 1.1.1. Community Development Associations with good understanding of climate risks and CC adaptation measures are established and operational in all target Village Units</p>	<ul style="list-style-type: none"> • 550 CDAs formed, strengthened and legally registered • At least 30% of leadership positions in CDAs held by women • At least 4,400 CDAs' members trained on CC adaptation and NRM 	<ul style="list-style-type: none"> - Official registration records - List of CDA members - MoUs - Training evaluation reports - Minutes from CDA executive committee meetings 	<p>The PMUs have the capacity to secure the expertise needed for the CB process</p> <p>Target beneficiaries are willing to form CDAs</p> <p>Intra-community conflicts prevent the effectiveness of CB processes</p>
<p>Outcome 1.2. The adaptive</p>	<ul style="list-style-type: none"> • At least 50% of the poor households in each VU 	<ul style="list-style-type: none"> - Training course Programmes 	<p>The PMUs have the capacity to</p>

capacity of farmers and other key agriculture practitioners on climate-resilient natural resources management and agriculture production is developed and demonstrated	acquire knowledge on climate-resilient agriculture, rangeland management and land restoration through training, field demonstration trials, and VATs support • Services providers in 550 VUs are able to train and advise farmers on CC-resilience	- Evaluation forms from training courses - List of participants - Tools and materials - Field surveys	secure the expertise needed for the CB process Target beneficiaries are willing to engage in CB activities Intra-community conflicts prevent the effectiveness of CB processes
Output 1.2.1. A training of trainers programme is designed and implemented to build the capacity of service providers with special focus on gender development needs	• At least 1,100 community members are trained as VATs on CC adaptation measures for NRM and agriculture production • At least 50% of trained VATs have applied their knowledge to support project beneficiaries and field demo plots	- Training course Programmes - Evaluation forms from training courses - List of participants - Tools and materials - Field surveys with a gender focus	All concerned actors are aware and willing to participate The project is able to provide relevant TA and identify best practices
Output 1.2.2. Rural households and women groups in target Village Units are trained on climate change adaptation and risk management in farming and rangeland practices	• At least 50,000 beneficiaries have received training on climate-resilient NRM an agriculture practices • 250 on-farm field demonstration trials have validated CC adaptation measures with the direct participation of project beneficiaries	- CDA reports - Contracts and agreements with farmers, VATs, researchers and NGO - Feedback from participants - Field surveys with a gender focus	The project is able to provide relevant TA and identify best practices Project beneficiaries eager to attend CB programme Conflictive social context prevents women participation
Output 1.2.3. Climate change adaptation and NRM are mainstreamed into basic literacy and vocational training provided for women target groups	• At least 50,000 women are trained on literacy/life skills • At least 30,000 women receive vocational training mainstreaming CC adaptation • At least 100 women attend study tours on successful CC-resilient enterprises	- Training course Programmes - Evaluation forms from training courses - CDA reports - Field surveys - Reports from learning tours	All concerned actors are willing to participate The project is able to provide relevant TA Intra-community conflicts prevent the effectiveness of CB processes
Component 2. Climate-resilient Investments in Natural Resources Management and Agriculture Development / Contributes to CCA-1			
Total GEF Budget: USD 7,150,000			
Outcome 2.1. Natural resource management improved and focusing on climate resilience	• Climate-risk reduction measures proposed within CAPs implemented in the 550 VUs • About USD 2 million worth of new/existing rural infrastructure made climate resilient	- Studies & surveys - Workshops' reports - Feedback from participants - CAPs documents and maps - Programme administrative records	Communities willing to participate Technology and equipment readily available for CAP implementation Intra-community conflicts prevent effective completion of CAPs
Output 2.1.1. Community Action Plans (CAPs) for vulnerability reduction produced, with focus on identified Landscape Vulnerable Areas of the five target Governorates	• 550 Community Action Plans (CAPs) integrating traditional knowledge and innovative technologies on water harvesting and storage addressing rain, run-off and fog collection, and soil and terrace conservation	- Baseline & impact surveys - Workshops and CDAs reports - CAPs documents and maps - Field surveys - Questionnaires with participants feedback	PMU has the capacity to effectively tap the CC adaptation knowledge needed for the production of CAPs Target communities are unwilling to collaborate in the CAP design process

Output 2.1.2. Integrated water management and soil conservation investments implemented in target areas	<ul style="list-style-type: none"> • Water harvesting and storage capacity increased by 30% in all target areas compared to baseline • 50% of irrigation systems in the project areas are made more efficient and climate-resilient 	<ul style="list-style-type: none"> - Baseline & impact surveys - CDA steering committee minutes - CAPs - Field surveys and feedback from project beneficiaries - Programme administrative records 	Technology and equipment readily available Target communities willing to implement CAP Intra-community conflicts prevent effective completion of CAPs
Output 2.1.3. Integrated rangeland and woody vegetation restoration plans implemented in target areas	<ul style="list-style-type: none"> • 80% of rangeland and woody vegetation rehabilitation plans (including reseeding, temporary enclosure, and eradicating of non-beneficial species) within CAPs are implemented • At least 5% increase in meat and milk production in restored rangelands 	<ul style="list-style-type: none"> - Baseline & impact surveys - Restoration plans - Questionnaires from project beneficiaries - CDA steering committee minutes - Field monitoring surveys 	Technology and equipment readily available Target communities willing to collaborate and contribute to CAP implementation Intra-community conflicts prevent effective completion of CAPs
Outcome 2.2. Improved climate resilient agricultural production and marketing adopted	<ul style="list-style-type: none"> • At least 25% of each target area is under integrated agriculture, rangeland, and water management 	<ul style="list-style-type: none"> - Baseline and impact surveys - Users' associations and micro enterprises operational books - Governmental data 	Target communities willing to participate Intra-community conflicts prevent effective completion of CAPs
Output 2.2.1. Agriculture production and diversification incorporates climate-resilient management systems and technologies	<ul style="list-style-type: none"> • Householder income from livestock and agriculture production increased by 20% • 30% in yields/unit of water used increased • 20% decrease in post-harvest losses 	<ul style="list-style-type: none"> - Agriculture production plans - Production records from different crops - Field monitoring surveys - Sales records 	Target communities willing to invest in CC-resilient equipment Governmental incentives for the creation of users' associations and micro-enterprises

Component 3. Climate Change Downscaling / Contributes to CCA-2

Total Budget: USD 1,000,000

Outcome 3.1. Institutional capacity for climate change downscaling analysis and agriculture resilience action planning developed and piloted for key crops	<ul style="list-style-type: none"> • CC adaptation production plans for at least 10 alternative crops developed and adopted by MoAI at National and Governorate levels • At least 10,000 beneficiaries apply the CC-resilience production plans produced and tested by AREA 	<ul style="list-style-type: none"> - Baseline & impact surveys - CDA reports - CAPs - Field staff reports - Programme administrative records 	All institutional stakeholders willing to become engaged Project able to secure needed TA and backup Political situation prevents Execution of the activity
Output 3.1.1. Climate change downscaling analysis for selected crops is carried out supporting participatory decision-making to adapt production, post-harvesting and marketing measures	<ul style="list-style-type: none"> • Climate suitability scenarios developed for at least 10 alternative crops in the 5 governorates and their agro-climatic zones 	<ul style="list-style-type: none"> - MoU with AREA - CB and assistance plan - List of research working lines and plans - Survey reports 	AREA willing and capable of engagement Project able to secure needed TA and backup Disagreement on working lines or methodologies
Output 3.1.2. CC downscaling knowledge incorporated into daily-work by policy decision-makers, researchers and technicians	<ul style="list-style-type: none"> • MoIA strategies and work plans incorporate CC resilience production plans for at least 10 alternative crops • Knowledge sharing plan carried out in terms of # of practitioners using CC downscaling results 	<ul style="list-style-type: none"> - Project reports - Leaflets and other materials - Strategies and workplans - Minutes from workshops 	VATS and MoIA willing to become engaged Conducive environment of cooperation among concerned institutions

<p>Output 3.1.3. Recommendations from CC downscaling analysis on at least 10 selected crops are demonstrated through research trials and disseminated to agriculture practitioners</p>	<ul style="list-style-type: none"> • 10% of CAPs in the five Governorates test alternative crops and cropping systems based on CC downscaling • At least 70% of project beneficiaries and partners have received published information on tested alternative crops 	<ul style="list-style-type: none"> - Field surveys - Questionnaires with farmers' feedback - Research reports and papers 	<p>AREA willing and capable of engagement Disagreement on working lines or methodologies</p>
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ANNEX B: RESPONSES TO PROJECT REVIEWS (from GEF Secretariat and GEF Agencies, Responses to Comments from the Convention Secretariat and STAP made at PIF)

STAP Comments	GEF Project Responses
1. How issues of insecurity, which might threaten elements of program implementation, will be addressed	<p>Previous IFAD programmes have continued to operate despite difficult security conditions. Expansion will be highly flexible in compliance with security issues.</p> <p>The project arrangements which increase ability to continue programme implementation during periods of political crisis include: (i) decentralized PMUs with full autonomy, accountability and independence which are not embedded within public organizations; (ii) extensive use of private sector service providers and community contracting, and (iii) investment activities in rural areas.</p>
2. How users will be involved in determining what climate information is needed for them to take adaptation action, and how that information will be disseminated	<p>The RGP baseline programme will support the establishment and/or strengthening of Community Development Associations (CDAs) at the Village Unit level to advocate and negotiate for investment resources, plan and implement their own development, and provide services to their members. Within this framework, LDCF resources will be used to build the capacity of CDAs and other local stakeholders to produce climate-resilient Community Action Plans (CAPs) to articulate their development needs, combining rural development and climate adaptation needs. Farmers and shepherds will be part of the CAPs production and implementation, identifying CC adaptation needs.</p>
3. How climate change downscaling activities described in Component 3 will be linked to Components 1 and 2	<p>The overall objective of Component 3 will be to build the capacity of public, research and extension institutions for testing alternative crops and cropping practices based on CC downscaling analysis in at least 10% of CAPs, as well as the adoption of the agriculture resilience plans produced and tested by AREA by at least 10,000 beneficiaries. Therefore, results from CC downscaling and test trials will be used to inform community resilience capacity building programming and community watershed action plans.</p>
4. How IFAD's implementation of an integrated watershed development approach will ensure a coordinated approach within each watershed.	<p>During the CAPs' development process, a number of locations will be selected as optimal sites for specific climate-resilient interventions, taking into consideration the principles of integrated watershed management. Interventions will be selected on the extent of resource degradation, their feasibility, potential socio-economic and environmental benefits, and minimal risks of damage and conflict among community members and with other communities within the watershed.</p> <p>Terrace rehabilitation and water use requires watershed-level coordination involving upslope and downslope farmers, as all the terraces located within a shared slope affect each other, meaning that unmaintained terraces might threaten the downslope ones with landslides and water damage. The CDAs will coordinate terrace rehabilitation over a particular mountain slope or sub-catchment area, and will involve the community in the selection of optimal locations for the rehabilitation of those terraces that are more likely to cause landslides and erosion problems upslope and downslope, as well as for the design of suitable water infrastructure systems alongside terrace rehabilitation. This will help prevent conflicts both between beneficiaries and between beneficiaries and non-beneficiaries that may jeopardize the project investments. The CDA will invite both landowners and sharecroppers whose terraces share a given slope or sub-catchment where terrace rehabilitation will be undertaken to associate and form groups for the management of the terraces.</p>
5. How the sustainability of climate change adaptation education, project results, lessons, and good practices to various stakeholders will be ensured	<p>The Environment and Climate Change Specialist will ensure that the measures included in the CAPs are carried out keeping in mind sustainability criteria, and making use of adequate adapted technology that allows energy saving and easy maintenance, also building on best practices from previous projects.</p> <p>The sustainability of programme interventions is ensured by the integration of lessons learned during implementation of projects being scaled-up, particularly</p>

	<p>with regard to: (i) empowering communities to drive planning, implementation and monitoring and evaluation to the extent feasible; (ii) ensuring sustainability of infrastructure investments through effective mobilization, training and regular follow-up of user associations by specialized field staff with a deep understanding of communities in which they work and extensive training in conflict resolution; (iii) linking saving and credit groups to microfinance institutions; and (iv) providing incentives to service providers to improve the quality of services offered to clients through performance-based contracting and supporting private agricultural and livestock extension providers (VATs).</p> <p>Long-term sustainability will be sought through a broad and deep CB programme, designed to create a critical mass of knowledgeable and skilled experts on CC adaptation for agriculture development at the national level, and among all actors – from institutional to grassroots. The training of trainers will be a key component of this programme. The CB process will integrate strong participatory elements to fully address issues that affect the long-term sustainability of natural resources and the welfare of local communities. The proposed approach to work in different agro-ecological zones and address the on-going and predicted impacts of climate change and climate variability for selected crops in each zone will be instrumental for scaling up interventions in the respective zones.</p>
<p>6. How gender issues impacting women’s participation in the program will be addressed</p>	<p>The gender focus will be addressed through mainstreaming gender in the project targeting as well as specific gender initiatives such as awareness raising, targeted education and training, institutional development, reducing barriers for women’s participation, and promoting women-led micro-enterprises for income generation.</p> <p>The literacy/numeracy training programme will be complemented with training on gender issues and life skills, such as health and nutrition, confidence building, negotiation and leadership skills, and entrepreneurship training to support to women’s self-employment. The LDCF project will add incremental value to this effort by making sure that NRM and elementary notions on climate adaptation are built into the programmes, with the overall objective that at least 50,000 women in the five governorates.</p> <p>The project will produce gender-oriented education materials and technical manuals. Moreover, the project will specifically support women saving & credit group associations through matching grants.</p>
<p>7. How the risk of lack of coordination and collaboration between the different institutional entities at national level (horizontal and vertical) that are in charge of the national strategies regarding the different sectors is addressed.</p>	<p>Cooperation, knowledge sharing and networking should be fostered, e.g. through the establishment of respective forums or mechanisms. Besides the already mentioned Ministries and agencies will be involved in the project planning and implementation. The development and implementation of CAPs will follow a participatory multi-stakeholder process involving civil servants at the central, governorate and local levels.</p> <p>A National Steering Committee (NSC) will be established at Sana’a and chaired by the Minister of Agriculture and Irrigation. Its members will include Deputy Ministers of each line ministry (e.g. MoPIC; MoAI; MoF; MoPW; MWE and MoLA). Governorate Steering Committees (GSCs) will be established, chaired by the Governor. They will also include representatives of different governmental institutions (e.g. the General Secretary of the Local Council; the General Manager of the Agriculture and Fisheries Department of the MoPIC; the General Manager of the Loan and Grant Department of the MoF; the General Manager of the Planning Department; the General Manager of the Women Development Department and the General Manager of the Project Department of the MoAI; the Agriculture and Irrigation Office Manager). The main responsibilities of each GSC will include: provide guidance to the PMU, approve Annual Work Plan and Budget, ensure coordination among all stakeholders, and with the Governorate development plans, review progress reports and performance of programme’s activities, and resolve any implementation matters.</p>
<p>8. How the risk of lack of capacity and limited</p>	<p>The capacity building actions implemented by the project will build on and make use of already existing structures, such as WUAs, to make sure that the right</p>

<p>understanding of climate change and resilience by Yemeni decision makers and other stakeholders is addressed.</p>	<p>people are targeted and involved and to ensure the understanding and the acceptance of the importance of the issue.</p> <p>A general understanding about CC impacts and adaptation opportunities will be raised throughout all training activities – e.g. literacy, life skills and vocational training for women; NRM training; climate-proof infrastructures training; entrepreneurship and marketing training; etc.</p> <p>LDCF will contribute to capacity development of all concerned actors and institutions to incorporate CC downscaling analysis into policy, community-planning, and agriculture value chains.</p>
<p>9. How involvement of local communities in the project planning and implementation is being considered</p>	<p>The RGP baseline programme will support the establishment and/or strengthening of Community Development Associations (CDAs) at the Village Unit level to advocate and negotiate for investment resources, plan and implement their own development, and provide services to their members. Within this framework, LDCF resources will be used to build the capacity of CDAs and other local stakeholders to produce climate-resilient Community Action Plans (CAPs) to articulate their development needs, combining rural development and climate adaptation needs. Farmers and shepherds will be part of the CAPs production and implementation, identifying CC adaptation needs.</p>
<p>10. How Yemeni traditional knowledge has been taken into account</p>	<p>The project will adopt an integrated approach combining community-based planning for climate-risks reduction, the sustainable use of agro-biodiversity, land and water integrating traditional knowledge and innovative technologies, the restoration of natural resources, and the establishment or rehabilitation/modernization of existing and new infrastructures (e.g. traditional agriculture terraces, water harvesting structures, roads). It will mainstream CC adaptation needs into infrastructure designing, spatial planning and agriculture practices and technologies, and help disseminate them among the most vulnerable population living in areas with high CC risk, with a special focus on women and youth.</p> <p>As part of the participatory processes for CAPs production, the project implementation teams and experts will identify good cases and propose a pre-defined open list of eligible options for investment that integrate traditional knowledge and innovative technologies will be put together, that can strengthen the adaptive management of agriculture land and rangelands and promote a more strategic and sustainable use of key resources such as water, soil, fodder etc.</p>
<p>11. How exchanging and coordinating with German development cooperation in Yemen during the planning and implementation phase will be addressed.</p>	<p>IFAD country team engaged in extensive consultations with the Government (MoPIC, MoAI, MoPWH), aid agencies (EU, WB, UNDP, GIZ, Islamic Development Bank), financial institutions, and local stakeholders to ensure that these principles were fully taken into account. Also, the proposed activities have been identified as priorities for the agriculture sector in the Yemen’s NAPA, PPCR, and SNC.</p> <p>Technical partnerships will be developed with several public and private institutions such as: the Adult Literacy Organization and other specialized NGOs (yet to be determined) for women’s empowerment activities; the World Bank-supported Public Work Programme which will implement activities related to drinking and irrigation water; the Agriculture Research Extension Authority and Range Forestry department for soil conservation activities, training of village agriculture technicians and research and development of alternative and new climate resilient crops; Small and Medium Enterprises Promotion Services, USAID and UNDP for agriculture production diversification and notably linkages with greenhouses producers, nurseries, and training of programme-supported greenhouses beneficiaries, as well as GIZ for the development of adequate financial products for agriculture, and the sharing of knowhow about GIZ experiences in by climate change mainly affected sectors, such as Integrated Water Resource Management (IWRM) and Food Security (FS).</p>

ANNEX C: CONSULTANTS TO BE HIRED FOR THE PROJECT

Position Titles	\$/ person months	Estimated person months	Tasks to be performed
For Project Management			
Local			
Environment and Climate Change Specialist (ECS)	1500	84	<p>Take overall responsibility and leadership on the planning, implementation and monitoring of the IFAD/GEF project.</p> <p>Manage the project in accordance with its annual work plans, coordinate the IFAD/GEF project activities on a regular basis, and ensure complementarities with CPIU/IFAD.</p> <p>Coordinate the work of TA, and ensure that the Governorate and locality level project teams have all the logistic, technical, and capacity building support required for the successful development, design, and subsequent implementation of climate-resilient CAPs;</p> <p>Support the PMUs in engaging in a close dialogue with the Governorate and locality authorities involved in the project and help them in the process of ensuring that CDAs members acquire the CC adaptation skills and capacity needed for successful CAP design and implementation.</p> <p>Support the NPCU Director in the selection and hiring process for all the national and international TA required for the implementation of the CC adaptation work. In collaboration with colleagues from NPCU and PMUs, draw specific ToR, Propose selection criteria, prepare detail work plans, and supervise national and international consultants/subcontractors, providing advisory support as required and maintaining strong quality control of their work, making sure it is fully embedded in the overall work plan of RGP.</p> <p>Maintain close coordination/linkages with all implementation partners (ministries and governmental agencies, media companies, private service providers and NGOs) on a regular basis.</p> <p>In collaboration with NPCU and PMUs colleagues, facilitate, monitor and supervise the process of identification and selection of lead farmers to be trained as Village Agriculture Technicians (VATs), and the set-up of key project capacity building outputs and tools, including the Training of Trainers programme, the on-farm learning-by doing programmes, and the basic literacy and vocational training for women groups.</p> <p>In collaboration with NPCU and PMUs colleagues, supervise the procurement and maintenance of project equipment and development of infrastructure. Prepare ToRs and conditions for grant applicants and ensure publication in local media. Lead the selection process of the grant applications through field review and final scoring by the Application Evaluation Committee. Make sure that the goods acquired by the project are e procured through a National Competitive Bidding process.</p> <p>With the assistance of TA and PMU colleagues, lead, coordinate and monitor the works implemented in the framework of the project grants – climate-resilient irrigation and agriculture technologies and management systems; restoration of agriculture land, woody vegetation and rangelands. In collaboration with</p>

			<p>NPCU and PMUs colleagues, supervise the work implemented by service providers, local partners and project beneficiaries for the rehabilitation and development of new infrastructures (water harvesting, terraces and roads).</p> <p>Oversee the work of service providers for the CC downscaling modelling of new alternative crops and the field demonstration trials.</p> <p>Oversee the needs assessment and provision of required training and capacity building of involved government officials; coordinate and facilitate all the steps of the mainstreaming process and monitor progress in legislation and governance improvement.</p> <p>In collaboration with NPCU colleagues, oversee the design and establishment of channels for regular project information dissemination, sharing, and networking among stakeholders' communities (from local to national levels).</p> <p>Monitor and supervise the quality of the awareness raising publications and the guidelines on best practices produced through the project.</p> <p>Lead responsibility for the organization of project-related meetings, conferences, and workshops.</p> <p>In collaboration with NPCU and PMU colleagues, provide support and guidance for the gathering of data and information needed to undertake an effective monitoring and evaluation of all the activities included in the IFAD/GEF initiative.</p>
For Technical Assistance			
Local			
Technical Consultants	2,072,301		<p>Undertake ground-mapping analysis and baseline surveys in project areas.</p> <p>Liaise with farmers and all relevant local stakeholders to gather know-how to cope with climate risks and assess local needs – training, organizational needs, regulatory frameworks, equipment, etc – for CC adaptation in rural development.</p> <p>Support the participatory mapping and planning processes for the development of CAPs, climate-resilient crop and livestock production plans, and land restoration plans.</p> <p>Support the organization and implementation of all training activities - ToT programme, field demonstration plots, thematic training courses for farmers, literacy/life skills training for women, vocational training for women, study torus for women.</p> <p>Support the on-site implementation and monitoring of the CC adaptation technologies and management systems by project beneficiaries, in the framework of the project grants, as well as in the framework of the demonstration trials.</p> <p>Provide guidance and technical support for the design and construction of climate-resilient infrastructures – agriculture terraces, water harvesting structures and roads.</p> <p>Support the development and dissemination of training materials, public awareness materials and good practices toolkits.</p> <p>Produce technical documents with demonstrated evidence for the use and dissemination of CC adaptation technologies and</p>

			<p>management systems successfully validated by the project.</p> <p>Promote multi-stakeholder involvement and collaboration among farmers, extension agents, private sector, public institutions, researchers, and NGO.</p> <p>Identify means for scaling-up CC adaptation technologies and management systems in Yemen.</p>
International			
Technical Consultants	163,991		<p>Undertake the analysis of technologies and management systems and their CC-adaptation benefits applicable to the agro-ecosystems and environmental and socio-economic conditions in the project areas.</p> <p>Support the design, implementation and monitoring of the on-farm field demonstration plots.</p> <p>Provide technical support for the adequate transfer and use of climate-resilient technologies and management systems suitable for the agro-climatic zones and local conditions in the project areas.</p> <p>Identify good case studies with successful experiences on the use of CC adaptation technologies by women groups in rural areas and provide support for the organization of learning tours.</p> <p>Provide technical contribution and guidance to the training of trainers (TOT) capacity building component.</p> <p>Develop CC downscaling modelling for at least 10 alternative crops, and provide training to key practitioners and guidance for the implementation of field demonstration trials.</p> <p>Provide support for the development of capacity building and awareness raising materials, and good practices toolkits.</p>

ANNEX D: STATUS OF IMPLEMENTATION OF PROJECT PREPARATION ACTIVITIES AND THE USE OF FUNDS

A. EXPLAIN IF THE PPG OBJECTIVE HAS BEEN ACHIEVED THROUGH THE PPG ACTIVITIES UNDERTAKEN.

The objectives of the PPG are fully achieved as demonstrated by the contents of the document and the specific studies as well as the extensive stakeholders consultation activities that have helped in a participatory project design at all levels. During the PPG phase, field observations, focus group discussions with national authorities, technical institutions, local farmers and other stakeholders, and analyses of available documentation and information has enabled an improved assessment of the adequate type of activities to be supported by this LDCF project. As this project is proposing innovative approaches for Yemen in terms of agriculture production, mainly related to climate-resilient systems and technology on water harvesting, efficient irrigation, sustainable farming practices, land restoration, and road construction, all the relevant initiatives that could be identified in the country were analyzed, and discussions held with relevant actors and institutions to capitalize on them and avoid duplication.

B. DESCRIBE IF ANY FINDINGS THAT MIGHT AFFECT THE PROJECT DESIGN OR ANY CONCERNS ON PROJECT IMPLEMENTATION.

The project approach and related implementation strategy are built on the principles of promoting climate change adaptation through national adoption, involvement of local institutions, active participation of farmers, and appropriate technology transfer. The project activities include innovative approaches on community-driven, area-based development programmes that have recently been piloted in Yemen within IFAD baseline operations with successful results in reducing poverty and food insecurity while empowering targeted rural communities and their women members in particular. Through the project preparation process, it was confirmed a need for strong technical assistance and backstopping on transferring CC adaptation technologies to ensure that project implementation leads to expected results and impact.

The project will also work towards a good and effective M&E system and to generate useful lessons to be shared across the country and neighbouring regions. To achieve such objectives, a robust supervision and field monitoring support through national and international TA is required and included to minimize risks.

C. PROVIDE DETAILED FUNDING AMOUNT OF THE PPG ACTIVITIES AND THEIR IMPLEMENTATION STATUS IN THE TABLE BELOW:

Project Preparation Activities Approved	Implementation Status	LDCF/SCCF Amount (\$)				Co-financing (\$)
		Amount Approved	Amount Spent To-date	Amount Committed	Uncommitted Amount*	
1. Assessment of institutional and stakeholders' training and capacity enhancement needs	Completed	6530	2400	6300	230	13630
2. Planning of tailor-made adult and youth education and awareness-raising programmes on climate change and sustainable resource use in the project areas and assessment of potential partnerships	Completed	6300	1950	5833	467	3700
3. Identification of interventions aimed at improving water efficiency and promoting sustainable resource management	Completed	32000	10820	24000	8000	59000
4. Mapping predicted climate change impacts on smallholder agriculture in the project area to guide interventions	Completed	23350	8020.08	8020.43	15329.57	32000
5. Planning and designing a monitoring and evaluation (M&E) system	Completed	2725	1100	1300	1425	3300
6. Preparation of project costing and implementation manuals	On-going	2000	730	1400	600	3800
7. Stakeholder consultations	On-going	2530	1850	2450	80	1800
8. Travels	Completed	4565	1150	1150	3415	7500
9. PPG management	On-going	0			0	28000
TOTAL		80 000	28 020.08	50 453.43	29 546.57	146 200

* Uncommitted amount should be returned to the LDCF/SCCF Trust Fund. Please indicate expected date of refund transaction to Trustee.